MONTHLY MAGAZINE.

JUNE, 1878.

WHAT shall we plant in our Cemetery? Is there any grass that will make a good sod and not grow so tall as to need cutting? My wife loved flowers and cared for them to the last. In what way can I best adorn her last resting-place with the beautiful objects she loved so well? My little angel boy loved the flowers, and often wandered alone in the garden smelling the fragrant blossoms, and talking to them in his sweet, childish way, and, I sometimes thought, held a mysterious, spiritual communion with them. Now I wish to plant the loved friends of his early life around his narrow home. What shall I plant that will grow without constant care, for, unfortunately, our house is far from the Cemetery, and care for the living occupies much of my time.

The above are extracts from a few letters now on our table, and are, in substance, like many others received during the spring season. Instead of answering these inquiries briefly, in the usual way, we purpose to embody our views in this article.

As the traveler approaches one of our villages or cities, perhaps a mile or two away on the main road, he observes the rural Cemetery, where the friends, the fathers and mothers and children of the living, whose pleasant homes are seen in the distance, lie silent in death. The impression received is not favorable to the character of the living, when it is perceived to be over-run with weeds and briars, the fences partially decayed, gates unhinged, grave-stones standing at every possible angle, while the vagrant swine and cows of the neighborhood quietly feed among the ruins. It is not pleasant to think that those who are enjoying the fruits of the toil, forethought and self-sacrifice of their lost friends, have so soon forgotten them. We would not like to live in a place the character of whose people is thus unfavorably advertised on the highway.

There are several reasons why Cemeteries are so sadly neglected, and it will be well to look at the causes before prescribing a cure. To say nothing of lack of taste and refinement, qualities which are able to overcome mountains of difficulties, the great trouble is want of system in their management. No one has superintendence of the whole, and while one little spot may be well cared for, a dozen are entirely neglected, the owners of the lots and the friends of the deceased being, perhaps, thousands of miles away. Many of our little Cemeteries were established years ago, when no one supposed the city or village would grow to such a wondrous size; so after a time it became necessary to provide other and more extensive grounds, and the little, original burial ground is shamefully abandoned. It should be removed at once and everything tending to show its original design obliterated, or else be kept in a condition alike respectful to the dead and creditable to the living.

The site for a Cemetery should be selected with care; an elevated position is usually preferable and drainage indispensable. The surface may be rolling and graceful, or somewhat broken and picturesque. If destitute of trees the ground should be treated as for a lawn or park, a few necessary main avenues being made, and enough trees planted for beauty and shade; sow the whole with grass. If the land is wooded, remove all trees, except a few of the handsomest, before making roads or sowing the grass. In certain places, for shelter, or as a screen from the roadway, or on the hill-top, or in some ravine, the woods may be allowed to remain. A little thought and taste will determine these points. The grounds thus far

THE CEMETERY AS IT IS.

should be treated as a gentleman's lawn or park. It is a common custom, whether a Cemetery is owned by a city or a company, to sell lots ranging from ten feet square upwards, and lack of care and no lack of avarice, on the part of the managers, have caused the difficulties which we shall point out, if not cure. The purchaser obtains a deed of a lot, and generally at an unreasonably high price, one or two members of the family, perhaps father and mother, rest there: the children are scattered over the great West, the lot remains uncared for, and the real owners possibly unknown. The result is that for a short time the lots are kept in tolerable condition, considering that every one improves or misimproves according to his own notion; but gradually one after another is neglected, the few who are left and desire to care for them are discouraged, and in a few years the Cemetery is a wilderness.

The absolute sale of lots without restrictions permits owners to sadly disfigure the grounds, for one builds an unsightly wooden fence around his little lot, another indulges in iron, while still others erect stone barricades, as though the quiet homes of the dead were about to endure a seige, all of which is expensive folly. When a lot is disposed of it should sell for a price that will pay its share of the original cost of the land and improvements, and so much more that the *interest of this surplus* will be sufficient to keep the grounds *in perfect order for ever*. This money to be expended by a superintendent under the direction of a suitable committee, and no erection should be allowed without the consent of this committee or their agent, the superintendent, except such as specified by general printed rules. In this way the care of the whole grounds is provided for, and its quiet beauty secured as long as time endures, for an intelligent committee will not only see that the grounds are kept neatly, but prevent the erection of any deformities to mar its beauty. The boundaries of lots may be marked, if necessary, by stones sunk in the ground, level with the surface, in the way surveyors make their land-marks.

The first thought may be that this plan is far too expensive for general adoption, save in the neighborhood of large and wealthy cities, but this is not so, as will be seen by a few figures. Land, we will suppose, can be bought near enough to any large village or small city for $300 an acre, and $200 an acre is spent for laying out the grounds, improving and fencing, making $500 an acre. If lots are 15 feet square there will be nearly 200 to the acre, but exclusive of roadways and portions left entirely for ornament, say 150 lots to the acre. This will make the actual cost of each lot less than four dollars. If they are sold for $30 each, which is less, we believe, than the price usually charged for burial lots, $25 should be invested in the best permanent securities bearing four or five per cent interest. This will give an interest of $100 or $125 a year, each acre, for its care,—more than enough to keep any grounds in the highest state of culture.

It may be asked, why not assess each owner of a lot a dollar or two every year instead of requiring an investment of $25 at the purchase, to be put out at interest? But this would destroy the whole plan. Consider the trouble and cost of collection, and its uncertainty, and the moving mania which possesses the American people, by which families are broken up, old homes deserted, and none left to care for the

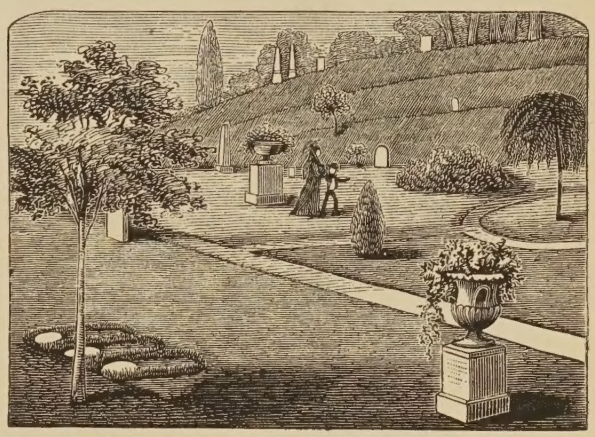
homes of the dead. The only safe way is to provide a fund at the outset, the interest of which shall be sufficient to keep up the Cemetery to the highest point of excellence for all time. If no extravagant salaries are paid and no large profits desired by those who have charge of the enterprise, this can be done without being at all burdensome. It will then be a pleasure instead of a pain to re-visit the resting places of deceased friends.

It may be said all will not be disposed or able to purchase lots, and still they must die and be buried like their better disposed or more wealthy neighbors. True; but if a section is reserved for this purpose, a very trifling sum, which can readily be figured—and much less than is usually charged—will more than suffice for the narrow homes of such as may not own Cemetery lots.

Perhaps some may think this plan will deprive them of the solemn pleasure of beautifying the graves of friends with their own hands. Quite the reverse of this is true. In visiting the well-kept Cemetery it will not be necessary to provide a sickle to remove the tall grass and weeds from the grave, nor to wander about in the vain attempt to escape the tangled briars and bushes with which the place is overgrown. The plant placed on the grave, surrounded by well-shorn turf, is like a beautiful flower in a chaste vase, instead of being lost in the general wretchedness.

"What shall we plant in our little Cemetery lot?" Many times, and indeed almost every day, we feel sadly embarrassed by this inquiry, while we know these places receive no care except what is given by a few persons, and that those who are so anxious to do something visit them perhaps only once a month or week for an hour, during the pleasant season. All our experience in gardening teaches us that everything worth cultivating requires care and watchfulness, and it is difficult to recommend things that will bear almost entire neglect. By the proposed plan all difficulties are solved, the grounds are kept as neat as a garden, and after the first trifling outlay, without a penny of additional expense.

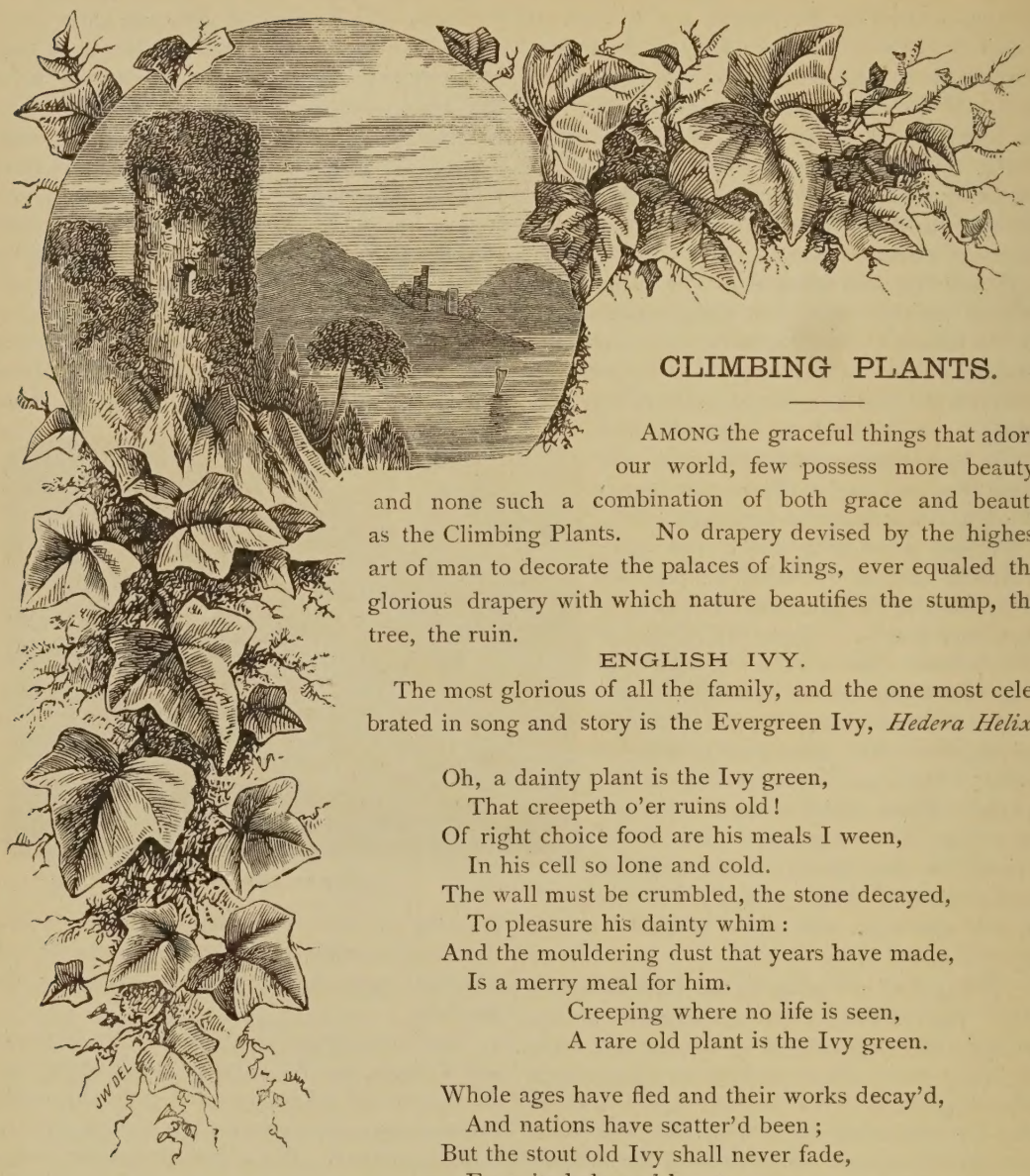
Although, as before observed, the laying out and general treatment should be as for a gentleman's ground or park, still the Cemetery may and must have a character of its own, not forced or artificial, or severe, but natural and graceful. This character can be expressed in no way so well as by judicious planting. The selection of trees for a rural Cemetery calls for the exercise of taste on the part of those to whom the work is committed. The evergreens, especially those of a slender form, like the Arborvitæs and Junipers, and the English Yew are particularly appropriate, but even these should not be used so freely as to give a gloomy appearance to the landscape. The Weeping Trees are always acceptable. In addition to these two classes, any of our native or foreign ornamental trees may be introduced. Avoid too profuse planting. Every tree should have room for its full development, and no pruning knife should be allowed to touch an ornamental tree. Its beauty consists in the form given it by the Creator, a beauty which all can admire, which we can also mar, but cannot mend. Trees are to ornament the grounds, and too much planting produces the same unpleasant feeling that always results from profuse ornamentation, whether upon the person, the house or the grounds.



AS IT SHOULD BE.

The flowering shrubs, the Lilacs, the Syringas and Fringes, and Weigelas need not be neglected, but should not be scattered over the grounds promiscuously, as they give it a broken and untidy appearance. Plant them in groups in appropriate places, and so close together that the group and not the single plant is daguerrotyped upon the eye. A beautiful group may be formed of the most ordinary shrubs, that, if planted singly, would rather disfigure than beautify the grounds.

When such Cemeteries are common, and our friends ask us what they had better plant in their little burial lots, the answer will be easy, —a few groups of simple, sweet flowers, such as the Lily of the Valley, the Snow Drop, the Forget-me-not, the Daisy, the Violet, with clumps of a few Roses, white Lilies and the Dicentra, Anemone Japonica alba, and plants of a similar character that will look well and do well. A few Crocuses and Snow Drops planted in the grass will make a very pretty appearance in the early spring.



CLIMBING PLANTS.

AMONG the graceful things that adorn our world, few possess more beauty, and none such a combination of both grace and beauty as the Climbing Plants. No drapery devised by the highest art of man to decorate the palaces of kings, ever equaled the glorious drapery with which nature beautifies the stump, the tree, the ruin.

ENGLISH IVY.

The most glorious of all the family, and the one most celebrated in song and story is the Evergreen Ivy, *Hedera Helix*.

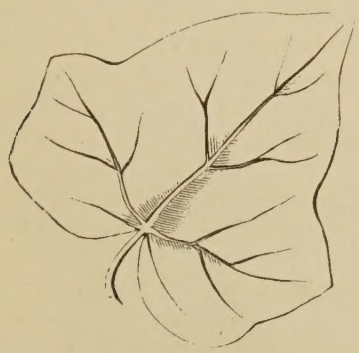
Oh, a dainty plant is the Ivy green,
That creepeth o'er ruins old!
Of right choice food are his meals I ween,
In his cell so lone and cold.
The wall must be crumbled, the stone decayed,
To pleasure his dainty whim:
And the mouldering dust that years have made,
Is a merry meal for him.
Creeping where no life is seen,
A rare old plant is the Ivy green.

Whole ages have fled and their works decay'd,
And nations have scatter'd been;
But the stout old Ivy shall never fade,
From its hale and hearty green.
The brave old plant in its lonely days
Shall fatten upon the past;
For the stateliest building man can raise
Is the Ivy's food at last.
Creeping on where time has been,
A rare old plant is the Ivy green.

Fast he stealeth on, though he wears no wings,
And a staunch old heart has he.
How closely he twineth, how tight he clings,
To his friend the huge Oak Tree!
And slily he traileth along the ground,
And his leaves he gently waves.
As he joyously hugs and crawleth round
The rich mould of dead men's graves.
Creeping where grim death has been,
A rare old plant is the Ivy green.

ENGLISH IVY-COVERED INN.

Those who have visited the Ivy-clad cottages and palaces and ruins of the Old World, will never forget the admiration with which they first beheld this wonderful plant, which fastens its little rootlets into every crevice, bearing its heavy masses of glossy green foliage hundreds of feet aloft, to the very point of the castle tower, never once faltering or losing



IVY LEAF.

its hold upon life and the old ruin, even though its trunk be severed in twain and all sustenance from the earth cut off. Its little rootlets seem to draw all needed nourishment from its rocky support.

While we have gazed with absorbing interest on the Ivy-clad abbey, rich in historic associations—a broken link, feebly binding the distant past with the present—our most pleasant recollections are of the ivied cottages, and especially of the little rural inns, embowered in Ivy and Roses. One of these, situated in the charming Isle of Wight, we present our readers, having secured a drawing when on a visit some time since.

Few plants show such a diversity in the form of the leaf as the Ivy, but our little engraving exhibits the more common form. The English Ivy is not so well adapted to this country as to England and Scotland. Our bright sunshine is not so congenial as the mist and fog and gloom of its native home. Indeed even there it seems to choose the gloom, the dampness and the ruin, rather than the more cheerful aspects. Still, if planted in shady places, it succeeds very well, and shade seems almost necessary: even in winter our bright suns cause more injury than the severest frost. For indoor decorations, however, we have nothing to equal the Ivy. It will endure more hardships, flourish under more unfavorable circumstances, and endure darkness, gas and dust better than any plant we think of at present. A pot of Ivy each side of a bay window will furnish beauty

WINDOW GARDEN, WITH IVY.

and freshness all through the winter months. In spring the plants may be set on the north side of a fence or building, and there will remain without care until autumn, when they are ready for re-potting and usefulness all through the next winter. Its branches and leaves are unsurpassed for floral decorations.

For a *Balcony Plant* the Ivy is especially desirable. Strong plants, placed in very rich soil in boxes or large pots, and well-supplied with water, will make a rapid growth, and furnish a green trimming or background for flowers that can be obtained so easily and cheaply in no other way with which we are acquainted.

AMERICAN IVY.

While it is true that we cannot grow the English Ivy as it is grown in Europe, we have in the American Ivy, *Ampelopsis quinquefolia*, a substitute almost as beautiful; perfectly hardy everywhere, a vigorous grower, easily transplanted, and one that will flourish anywhere on any soil, and under the most unfavorable circumstances. It will come up from a little root by the side of a stump or tree, or fence or stone-heap, and transform, in a season or two, the most unsightly object into a wonder of beauty. It is so vigorous and tenacious of life that it is much easier to allow it to grow than to destroy it. No plant furnishes a more dense or graceful shade, and we think it without a fault. It is the harbor of no insects, the flowers are inconspicuous, and late in the autumn are succeeded by clusters of black berries. On the approach of winter the leaves begin to change color, and, before falling, are of the deepest scarlet, — more brilliant than any of the autumn leaves, except perhaps the Sumac and the Maple.

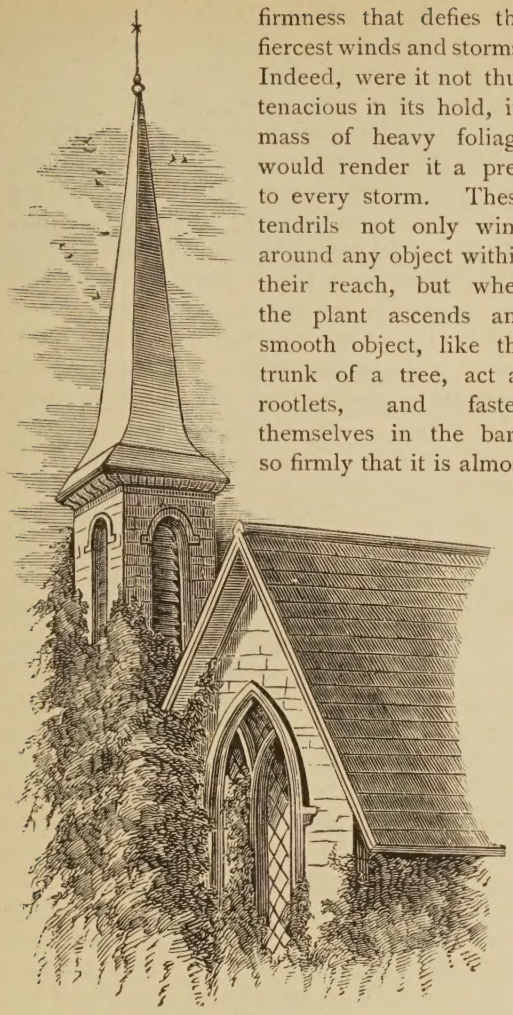
Our people have not properly appreciated this plant, and until recently few were planted, though no one could pass through the woods and fields, especially in the autumn months, without admiring its great beauty. In Europe it has been properly prized, and some years ago we thought we observed more plants growing in gardens, in one day's ride, than we ever saw in America. We have taken occasion to call attention to this valuable plant in various ways since, and now, in the neighborhood of Rochester, scarcely a porch or verandah can be found that is not beautified by the American Ivy.

There seems to be no limit to its growth. Last season we saw a mill, standing on the bank of a ravine, covered with the Ampelopsis. The branches we traced down the ravine twenty feet to the roots, while the whole four stories were covered to the eaves, where the branches, having no opportunity to climb further, hung down in graceful festoons. We present our readers a view of a church in the same neighborhood adorned with this beautiful hardy climber. This plant, being a native of our open woods and fields, can be procured by many with a little trouble and no expense, while good plants can be purchased at any of our nurseries for about twenty-five cents each, and may be planted either in the spring or autumn.

The Virginia Creeper supports itself well in

AMERICAN IVY.

almost any situation, by its numerous spiral tendrils, which are as strong almost as wire, and grasp any object within their reach with a



AMERICAN IVY.

firmness that defies the fiercest winds and storms. Indeed, were it not thus tenacious in its hold, its mass of heavy foliage would render it a prey to every storm. These tendrils not only wind around any object within their reach, but when the plant ascends any smooth object, like the trunk of a tree, act as rootlets, and fasten themselves in the bark so firmly that it is almost impossible to remove them without the destruction of the bark or any similar object to which they may be attached.

CLEMATIS.

The Clematis is one of the most prized of the Climbing Plants. The old *Virgin's Bower*, *C. Virginiana*, we remember as long as we do anything, with its little common white flowers, and the seeds terminating in long, feathery, curly tails. Among so many good things it is still a desirable Climber. *C. flammula* or *European Sweet*, is an excellent fragrant plant; but all other varieties are entirely eclipsed by the new English hybrids, like *Jackmanii*, with flowers five or six inches across, borne in immense quantities almost through the entire summer. Our only fears have been that these fine sorts would not prove hardy at the North, and they may not entirely so, though we have wintered a good many, and very few have shown any ill effects from the severest weather.

C. JACKMANII.

CLEMATIS ON ROCKERY.

Having a rather unsightly pile of stones in the back part of our grounds, we had them thrown together more in the form of a stone-heap, perhaps, than anything worthy of the name of rocky, and planted *Jackmanii* and other fine sorts in the crevices, and for three summers this stone-heap has been covered most gorgeously. Thousands of flowers — in fact a mound of flowers, every day for months, has been the delight of visitors, causing one to exclaim, "Nothing since Paradise has been more beautiful!"

TRUMPET VINE.

Another of our hardy and useful Climbers is the *Trumpet Vine*, *Bignonia radicans*. Like the last named it is a most vigorous grower, and so hardy that no frost or heat was ever known to do it harm. How far north it may be planted with success we are unable to say,

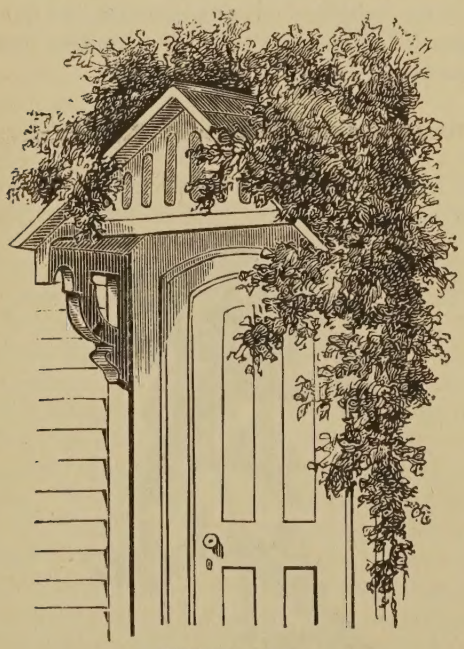
TRUMPET FLOWER.

but at our nearest approach to the North Pole we found the Trumpet had preceded us and was happy in its northern home. The leaves, as will be seen by the engraving, are compound, and are of a lively green. The flowers, as its name indicates, are trumpet-shaped, two or three inches in length, and the mouth an inch across. They are borne in clusters on the tops of the branches.

TRUMPET VINE.

CHINESE WISTARIA.

The Chinese Wistaria, *Wistaria Chinensis*, is certainly one of the most magnificent hard-wooded Climbing Plants in cultivation. Never shall we forget the time when first we saw the plant in flower — a mature plant, covering the whole side of a building, bearing hundreds of its long, pendulous racemes of light blue flowers. It was at first thought that the Wistaria was too tender for any but a Southern climate, and in the North must be confined to greenhouses, where it was soon found running along the rafters, in this way taking the place of the time-honored Passion Vine. It was ascertained, however, to be hardy, though it is well to cover young plants for a year or two after planting. The growth is sometimes rather small for a year or two, when it will start and grow twenty feet or more in one season. Flowers are not generally produced until the plant becomes pretty strong. The racemes are often twelve inches in length and densely filled with its delicate, light purple flowers, which are highly perfumed. The foliage is abundant and of a lively green. The flowers appear about the last of May in this section, and before the leaves, or at least before the leaves have become conspicuous. It very often gives a few flowers later in the season, in fact we have known plants produce flowers almost every month until autumn.



WISTARIA VINE.

WISTARIA FLOWER.

Among all the Climbing Plants with which we are favored none are more beautiful than the Wistaria, but we have said so many good things of so many that our friends will think us indiscriminate as well as impartial in our praise. The truth is we have only described a few of the best, and every one eminently worthy of culture. In our next number the subject will be continued.

INFLUENCE OF FLOWERS.

The pleasure of cultivating a flower garden, and the particular love for its products, are of late growth in me, but I confess it the more willingly because I think it the result of increasing wisdom rather than the folly of age. It affords a quiet amusement, full of subjects for observation and thought, and I find pleasure in all the work. I love to dig in the loose mold that seems to move almost as if it were alive. We should naturally have a liking for what we are made of and for what is made of us, and can get no where so near to ourselves as by contact with the brown mold, that is nature's unspoiled and unmanufactured material, alive with all the wonders of creation. No laboratory can produce such wonderful combinations as the earth. It dissolves, absorbs and purifies all things. The Parsees who, in their love and reverence for the earth, feared to pollute it with any corruption, overlooked its most beneficent attribute. It takes into itself all corruption and returns only purity and beauty. And for a little work what great returns one gets. I but give a little seed the small charity of burial, (and it is not a mournful funeral either,) and am repaid not only with plenty of flowers and seeds, but with the perpetual pleasure of its constant growth. One must give care and companionship to plants and flowers to learn their grateful nature and feel their beneficent influences. Their healing virtues are not alone in their juices. Their "sweet influences" comes nearer and stronger than that of the Pleiades. They are unrivaled, too, as friends and companions. Their conversation is always in charity and good sense. Spleen, egotism, envy are never heard in a garden from any thing that grows out of the ground. These are noxious gases that flowers can't abide, (are there people who can't succeed in growing flowers?) as a consequence they are always agreeable companions; never loud and disturbing; never cross and irritating. Go into the garden weary, angry or disappointed, and relief comes without rest, or the nauseous dose of rebuke or condolence. There is a presence — a spirit in the woods that becomes domesticated in the garden. The "solitude" of the garden is pleasing, because in reality it is the choicest companionship. I would not have statues in a garden. The timid sylvan spirits that might hide behind a rock or a fountain, would flee from the glare of cut marble.

Then, how many things a little ground will make room for. My garden is scarce four square rods, and yet it would make a respectable catalogue to name all the plants in it. Almost all the countries of the earth have contributed to it; and though I think that Flora has been about equally generous to all parts of the world, it is a satisfaction that our republic of flowers, like our political one, should be strengthened from all countries. The growth of flowers, too, is full of surprises; you watch for the bloom of a favorite with great interest, to-day you can find no sign of a bud, to-morrow the sly thing will, perhaps, show you one half developed. Something has come to you from half round the world, you have read descriptions or seen pictures of its flowers, and you know just how they look; or, you are watching patiently for a bloom you do not know, but suppose to be very rare and beautiful—or you failed to get flowers from a plant last year, and you do not think it will do better this year — in these, and a hundred other ways, they surprise, please and disappoint you, and keep up your interest, so that having once fairly made their acquaintance, you dislike in a double sense to cut them.—D. V. D., *San Francisco, Cal.*

MR. VICK: — I must tell you how nice our garden is looking. It is three weeks to-day since our first planting, and it is all up, every seed grew, I know. The Onions are coming up so vigorous, and the Radish leaves look so large and strong, and I believe the early Peas grow more than an inch a day. We shall plant again in a week or so. It is very encouraging to see everything growing so nicely; even the wheat fields look lovely. — MRS. H. L. I., *Wellington, Kansas.*

CABBAGE CULTURE IN THE SOUTH.

If you wish to confer a favor on your Southern friends, (and I hope they are many) you can advise them to plant their winter Cabbage seed in April, as the plants will then be old enough to resist the ravages of the fly, which does not appear here until May. It is true they will have a longer season to await a removal to be cultivated, but we always allow them to remain in the grass. If planted thick enough they will not be troubled, unless a few weeds spring up, and they can easily be drawn with the hand. When we set out in July, August and September, they are then very "long legged," as my husband calls them, but he has a well-prepared, deeply-plowed bed for them, and sets them up to the bottom leaves. When treated in this manner they will make fine heads, and with but little trouble. Sometimes, when they are induced by the season to burst, and have a tendency to go to seed, this can be easily checked by root pruning. With us they stand out all winter with no protection, unless it be a newspaper or some other light material, thrown over them to protect the outer layer of leaves. Allow me to say how very much I prize the Sea Pink, or Armeria, which is now in full bloom. I consider this quite an acquisition.—MRS. E. R. B., *St Elmo, Miss.*

FLOWER BEGGARS.

There is, perhaps, no nobler, more honorable and refining calling than that of the florist. There is no calling, however, that is more pestered with beggars, for there are yet quite a number of people in the world who believe that flowers are of spontaneous growth, and therefore cost nothing for their production, so they are justified in getting them without cost to themselves, if possible. The church beggars are, possibly, the most avaricious of the whole tribe, for to beg for a church seems to give a latitude that others have not. The writer has had charge of several public and private places where flowers were grown for sale, and has often been tried sorely by the begging family. Many, otherwise good people, have the idea that plants, like TOPSY, growed, and that, too, without expense, and they ought to get them as they do wild flowers.

I have seen respectable looking women walk into a florist's place and begin to take off slips and collect seeds which had cost the owner a good sum of money. Of course, if any one interferes with them, "he is stingy." If such work was confined to people who were not able to buy such things, there would be some excuse, but it is often done by people well able to pay for flowers and seeds.

One Sunday morning the writer received an order from his employer (a florist,) to get a seedy, cadaverous looking person some flowers for a church, and after getting at least ten dollars' worth, he complained and wanted more. The writer said, in vexation, "See here, if you are not satisfied, go and get another order, and if it says I must I'll give you every flower on the place." This URIAH HEAP looking person then walked off, and I was told that he was peddling flowers next day.

I have often given to some "old housewife" who was fond of plants, "Irish cuttings," that is, cuttings with roots on, because I knew they were fond of plants and did not go round seeing what they could steal or beg, but were willing to lay out a few cents to gratify their taste, though only earning enough to keep body and soul together, and often have received from such not only thanks, but even more substantial compensation in some way.

There are, I am sorry to say, mean florists, but the tribe is not numerous. The majority are largely gentlemen in every sense of the word, who pay for their plants, pay their men, and act honorably under all circumstances. —AN OLD GARDENER.

SUMMER TREATMENT OF CALLA.—Last summer I placed the pot containing a Calla in a firkin, and kept it filled with water all the time, the water being several inches above the top of the pot. It grew vigorously. In the fall I repotted it, and this winter have had six of the largest and handsomest Callas I have ever seen. There are two plants together, and the blossoms came in pairs, hardly more than a day's difference in their appearance. The first pair were three feet six inches high, and six and one-quarter and six inches, respectively, across the top of the flower. The last pair were three feet eleven inches high, and a trifle smaller. The coming season I expect there will be a great demand for butter firkins in this neighborhood. —L. A. C., *Andover, Mass.*

HYACINTHS IN JAPAN.—I am afraid Hyacinths, and possibly Tulips, will not do well in this climate. Mine do not look so vigorous as last year. Most flowers thrive summer, fall, winter and spring, in-doors or out.—V. C. H., *Kin Kiang, Japan.*

THE OREGON CURRANT.—Our Oregon Flowering Currants are now in bloom and will remain so from four to six weeks. They are a beautiful sight, will grow from six to eight feet, or can be kept cut back to two or three feet. —MRS. M. E. G., *Forest Grove, Oregon.*

TREATMENT OF PERIWINKLE.

MR. VICK:—As a contributor to your very pretty MONTHLY MAGAZINE I venture to ask for some information which may, perhaps, be of interest to other of your readers besides myself. I refer to the proper treatment of that old-fashioned, but hardy and charming plant, the common Periwinkle, or Vinca minor, sometimes improperly called "Trailing Myrtle." One rarely sees it in gardens now, perhaps because it is so much used in cemeteries; yet nothing quite takes its place for beds in shady corners, where other plants will not thrive. Amongst my early recollections are the great masses of Periwinkle in my grandfather's city garden, lovely when covered with their purple stars, and hardly less so after flowering, when the thick, rich cushions of verdure were only second to English Ivy in their green beauty. I have seen it in the south of France, covering steep road-side banks almost as closely as grass could do. In that climate, by the way, the flowers attain the size of half-a-dollar.

But, in spite of my fondness for Periwinkle, I do not succeed with it. As soon as my beds are well covered the plants become leafless at the bottom, and the bare patches are poorly concealed by bringing over them the runners, which send down rootlets readily enough outside their prescribed limit, but decline to do so among the old plants. Some of my friends advise me to dig up the bed every year or two and separate the roots, but if this were done the bed would always look thin, raw and new. Others recommend me to cut the plants off close to the roots every autumn, but one of the great merits of the Periwinkle is its semi-evergreen character, and the bright green which it retains after everything else has long been brown.

When ordinary doctors disagree over a sick bed, friends call in, if possible, some great light of the profession to settle their doubts. Allow me to submit the case of my Periwinkle patients to the highest authority attainable.—E. R. D., *Boston, Mass.*

We know nothing of the disease, and can therefore suggest no cure. Here the plants will spread with wonderful rapidity, and overrun everything within hailing distance, even passing under or through fences and invading sidewalks. It is a most desirable plant when properly used.

GARDENING IN WYOMING TERRITORY. — In this latitude, on account of short seasons and frequent frosts during the entire summer, and also on account of wind, dry air, and no rain, we are unable to plant our flower seeds out of doors, and consequently rely entirely upon house culture for our flowers.—MRS. A. A. E., *Evanston, Wyoming Territory.*

PLEASANT REMEMBRANCES. — "Cast thy bread upon the waters, for thou shalt find it after many days," the good book says. The lady in Cayuga County was not the only grateful recipient of those packages of flower seeds. They were a solace to many who have passed away, and the few who remain often revert to the kindly giver, until now unknown. Previous to our coming to America, in 1831, a great part of my husband's life was passed in one of the commercial establishments in the city of London, and consequently he knew nothing of agriculture. In the spring of 1832 he commenced farming operations under the directions of the *Genesee Farmer*. Its teachings he faithfully followed several years, and although, in derision, often called the book farmer, the Premiums awarded at the County Fairs for crops and animals proved his farming was successful. Permit an old woman, nearly seventy-five years of age, to give, at this late day, her mite of thanks for your beautiful blossoms. — A. F. A., *Scriba Center, N. Y.*

GLADIOLUS. — In taking up your Gladiolus in the fall be sure and gather all the small bulblets that are clustered around the parent plant, and vary in size from peas to pin-heads. Store them with the large bulbs, and the following spring, as soon as the hot-bed is ready, procure a box about four inches in depth and fill it with good soil. Plant the bulblets in it and place in hot-bed, and let it remain until the ground becomes warm, say in June, at which time sink the box in the open ground and the bulbs will go on growing all the time. In the fall take them up at the time you remove the large bulbs. A few will form blooming bulbs for the next year, others in two years, and so on in proportion to size. The trouble is not great, and the space they occupy in the garden is quite insignificant, and in a few years your stock of Gladiolus will be greatly increased in a most inexpensive manner.—AMATEUR.

PETUNIAS.—If there are any of the readers of the MAGAZINE who have not yet tried a paper of Petunia seed, marked in the Catalogue "Choicest mixed from Show Flowers," I would earnestly entreat them to do so. That they will be surprised, dazzled and delighted at the gorgeous display which a packet of these seeds will produce, I have not the slightest doubt. The flowers are of firm texture, immense size and varied colors, including purple with a metallic lustre, white, crimson, green-edged, and many other shades. They are simply magnificent, and are sure to be admired.—SOLON.

PHLOXES AND PETUNIAS SOUTH.

MR. VICK:—My first attempt at raising flowers was in 1876, and among them was some Phlox Drummondii. It came up and bloomed beautifully; the seed dropped from them and came up during the summer, and when cold weather set in the plants were about three inches high. I threw some green pine boughs over them, and early in the spring they were a blaze of bloom, when others were about sowing their seed. I also dug up my Petunia bed in November, and put brush over them, and they came up so thick that it took a good deal of thinning to get them the right distance apart. I got a paper of Verbena seeds, last year, and had eight plants from it, all different colors, one pure white; in July they were about five and six feet in diameter, they bloomed until frost, and then the green looked so fresh that I threw some green brush over them for an experiment, not having the least idea they would live, but at the present writing (March 1st,) every bush is perfectly alive. My success has been all I could desire, and your books have been the greatest help to me. I am always quoting VICK when flowers are the subject of conversation, and my friends somtimes tease me about it, but my faith is unshaken.

There is one thing I want to ask you. In 1876 I bought a paper of Pentstemon, among them came up a stray plant which was singular in appearance. I took care of it, and last year about June it sent up a flower stalk, with leaves joined in one around the stalk, and so deeply cupped that one leaf would hold two spoonsful of water, and the flowers came out on little slender stems all round the inside of the leaf. They were about the color of carnelian, and fragrant, in shape somewhat like Snapdragon, about half as large, but quite as long; the flower stem grew to about four feet, and bloomed out from every leaf. The stem died to the ground late in the summer, but the rest of the plant is flourishing. It is dark green, and purple veined, leaves quite thick. I am anxious to know what it is. Please let me know through your book.—A. B., *Lottsburgh, Va.*

In Virginia and other Southern States the Phlox, which at the North is a Tender Annual, at the South is a Hardy Annual. In this section we produce thousands of young plants every autumn from fallen seed, but few survive the winter, and these are not so vigorous as fresh young plants. Please send us a specimen leaf or two, and flower if possible.

FLOWERS IN OREGON.—This is such a mild climate, generally, that flowers do well. We had lots of Pansies in bloom every month through the past winter.—MRS. S. C. R., *Dallas, Oregon.*

HEN AND CHICKENS DAISY.

MR. VICK:—Herewith I send you a few seeds of a very curious plant, and which are quite a curiosity here, although they may be common enough with you: if so just throw them in the fire. The plant is known here as the "Calvary Clover," and when it is young there appears upon the three leaves a very good imitation of a red spot of blood. The seed is also quite characteristic, the envelope being known as the "Crown of Thorns," and by commencing at one end it will unwind, thus releasing the seeds. My little daughter, who is very fond of flowers, and who looks eagerly for the numbers of your MAGAZINE, wished me to send you a few of these peculiar seeds. She also wishes me to tell you about a "sport" she had in her garden last summer. She grew some Double Daisies, using the plants for a border. They flowered very nicely, but one in particular was very odd. Just as the flower commenced to fade small buds appeared to be bursting from around the heart, and fifteen or sixteen miniature Daisies, with stalks about one and a half inches long, were perfectly formed, and lasted for some time, new ones taking the place as others faded away. I am sorry I did not get it photographed, as it was quite a curiosity.—W. C. A., *Newcastle, New Brunswick.*

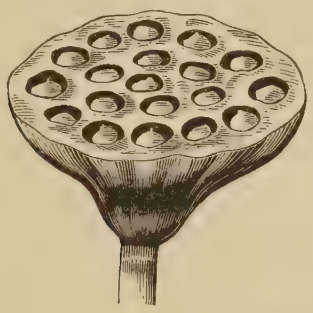
The seed did not reach us, but from the slight description given we suppose it to be *Medicago maculata*, Spotted Medick. The Daisy often produces flowers as described; indeed, a variety with this habit is known as *Hen and Chickens*.

FLOWER TEACHERS.—MR. VICK:—You say "The culture of flowers teaches industry, patience, faith and hope." I think you may add courage and persistency. Our little garden, although very far from a success, has taught me many, many lessons in these things, and truly, I do feel "better prepared for the duties and responsibilities of life,—more fitted to conquer its evils and enjoy its pleasures." Ruskin tells us whatever sets the glory of God before us is preeminently useful to man. So flowers are useful to me, and I wish and try to be sincerely grateful to the Author of every good and perfect gift.—E. C. B.

THE SALPIGLOSSIS.—I am going to try two of your little favorites for the first time,—Nemophila and Whitlavia. If they do well, I will send you an account of them. I have a little favorite of my own,—the Salpiglossis. I wish some one would say a good word for it. I know it is not particularly showy. It does not pretend to be a Pæony, but I defy any one to look it fairly in the face and say it is not beautiful.—M. E. B., *Elmira, N. Y.*

WATER LILIES.

MR. VICK:—I see in one of your FLORAL GUIDES for last year a very interesting article giving an account of our native water plants, among which the Lilies figure conspicuously. But I do not find in that enumeration one Lily which is a very remarkable plant, and one which, in the east, is of classical fame; I mean the Nelumbium luteum, which is the famous Egyptian Lotus plant. This Lily grows in various places in the eastern part of this State, along the marshy indentations of our sounds, and in the mouths of the creeks and rivers which empty into them. It grows in deep water, and sends up its leaves and flower stems very much as does the Nymphæa odorata, which abounds with us in all creeks and ponds to the greatest profusion. The flower of the Nelumbium luteum is a delicate yellow, about the size of the flower of the Magnolia grandiflora; but the most remarkable thing about this Lily is its seed pods. After the flower is matured and falls off, this seed pod developes into a large



SEED POD OF NELUMBIUM LUTEUM.

dish from four to six inches in diameter, with round holes in the top which are filled with seed about the size of an ordinary acorn, and these seed are very good to eat, and I have seen in books of travel that the Chinese and Japanese prize them as the most delicate nuts that are eaten. They are very nice when they are first ripe, having a rich, sweet taste, and after they are dry and hard they are still very good. I will try and give you a representation of these seed pods. The shell of the seeds are very hard when dry, and they should be cut through to the nut when planted, to enable the water to get to the germ to make it expand; otherwise they will lay at the bottom of the water several years before they sprout. The seeds are called with us, Duck Acorns, as the wild ducks are very fond of them, and dive to the bottom for them after they fall and sink in the water.

By the way, will you tell me how the Nymphæa odorata is propagated. I have never been able to find any seed of it. My attention has lately been directed to this part of its propagation from a rather singular circumstance. A few miles from this place there is a small pond of water on a piney woods ridge, several miles from any water course, and this isolated pond is full of a beautiful pink and white water Lily, with leaves and flowers larger than the ordinary white Lily by at least one-third. I never saw this species of pink and white before last spring, though I have been familiar with the white all my life, and have seen acres of them at a time. But here is the singular fact which has aroused my curiosity. About two miles from this pond of Lilies, there is a bottom into which this pond drains, but the run through which the water passes is filled with grass and trash so that there is no distinct stream, but the water creeps along amidst the sedge and brush. Now, four years ago this bottom was dammed up to make an ice pond, and in three years from the time the dam was built this ice pond, which never had a Lily in it before, was covered all over with those beautiful pink and white Lilies, and they bloomed there from early spring till it froze in the fall. I have examined the top of the flower stem of these Lilies, and I find no seed nor any sign of a seed cup. I have dug up the roots and I find no bulbs upon them which might separate from the root and be carried down to propagate the plant; but in this case, any thing as large as a bulb could not have made its way through the obstructions between the ponds. How then were these Lilies transferred from the higher to the lower pond? Is there a seed cup at the base of the flower which produces small seed that might be floated through grass and weeds and brush for miles? I should be very glad if you can enlighten me upon this subject.

I have been an amateur cultivator of trees and plants and flowers for forty years, and still my fondness has not abated in my old age, and I think you will have a fellow feeling with me in desiring to find out the mystery. That Clianthus Dampieri that I got from you some years ago, grew and bloomed magnificently, but the root would not stand the winter, and died after all my care and protection. — JOS. BLOUNT CHESHIRE, *Tarboro, N. C.*

Nymphæa odorata is sometimes pinkish, indeed, very often tinted. Very strange and unaccountable things occur in the transmission of seeds. The flower of Nymphæa odorata is borne on a long stem, which reaches the surface of the water. As soon as the flower begins to fade and the seed to grow, this flower stem contracts and curls up, carrying the seed vessel to the bottom of the water, where the seeds are perfected and in a proper situation for growth. The seed is not fine, and would not float on the surface, but might be carried along with the sediment, near the bottom. The Nymphæa odorata is certainly one of the best of our Water Lilies, perfectly hardy far north, easily cultivated, and is now grown by thousands of people in ponds, and tubs and aquariums.

THE FARMER'S GARDEN.

It is pleasant to notice the growing taste and wisdom of farmers in the matter of home comforts and home adornments. Well I remember, only a few years ago, but very few farmers in my neighborhood paid any attention to the garden; and some, even among those reputed to be "well-to-do," had not a plant of Strawberry, Blackberry, Raspberry, or any other small fruits, save perhaps a few Currant bushes overrun with suckers, and no fruit trees, except Apples, and an occasional Pear or wild Black Cherry. Some grudgingly gave a few rods of land to the cultivation of "garden sass," and the women were allowed a square yard or two in one corner for a flower bed. Through the instrumentality of the Agricultural and Horticultural press, our farmers are being taught that the getting of money is not, or should not be, the chief aim of man, and are learning to appreciate the bountiful gifts of the Creator in the healthful vegetables and fruits, and the beautiful flowers, shrubs and trees, which he has given us in such endless variety of habit and character as to be adapted to any condition of soil, climate, or other circumstances. As I said in the beginning, the growing taste and wonderful changes in home surroundings, not only in this locality, but wherever we go, are gratifying. And it is to be hoped, and I think reasonably so, that the time is not far distant when at least one or two acres of land around the dwelling will be devoted to growing choice vegetables, fruits and flowers, with shady arbors and well-kept lawn,—everything artistically arranged, and the whole tending to make home beautiful and attractive, inspiring a love of horticultural pursuits in the young members of the family which will prevent that longing desire, too frequently seen in farmers' sons and daughters, to get away from the monotony of farm life, and seek occupations in the cities. I am sure your very attractive MAGAZINE will do much to carry on the great reformation, and I trust my brother farmers, especially those who make the "getting of gain" the chief problem of their lives, will stop and consider for a moment how much joy and happiness there is for themselves and those dependent upon them, within their reach, and requiring but a very small sacrifice to be obtained.—SUFFOLK.

PANSIES IN MONTANA.—"This is the best country for Pansies I have seen. They bloom here with absolute splendor. I had Pansies blooming in March out doors, and now have a fine lot in bloom." So writes the editor of the *New North-West*, of Deer Lodge, Montana.

DAHLIAS FROM SEED.—To raise Dahlias from seed and have them bloom the first year, first procure a paper of mixed seed from named flowers. Then, from the 15th to the end of February, sow them in fine soil in shallow boxes, and place in the windows of a warm kitchen or other room. The seed germinates readily and quickly. Allow them to grow on in the boxes until the hot-beds are prepared, then prick the plants out into three-inch pots and place them in the hot-bed. There they grow rapidly, and when planting out time comes they will be as far advanced as plants grown from tubers, and will bloom about the same time. A fair percentage of the flowers will be perfect and the remainder semi-double and single. Of course the latter are rejected, but as to the semi-double many of them are very showy and attractive, with their bright yellow center, and I prefer them to those intensely perfect ones with the hard green center. Perhaps my taste is depraved. I suppose professionals would say so.—MAC, *Templeton, Ont.*

GENUINE LOVE.—A Student of Theology at an Institute in Wisconsin, writes:—"I have undertaken to beautify the grounds with flowers. I receive no pay for my work except pleasure, and being a great lover of flowers it is no small amount. Every spare moment that I can snatch from my studies is spent among my pets, for I love them with enthusiasm, and though poor, very poor in this world's goods, I would sooner wear a shabby coat and have flowers, than broadcloth and be deprived of the lessons they teach me. May God bless you. You are doing a noble work. I have taken your flowers to many a sick bed, and seen them awake the smile of hope and love. May you be spared for many years to make the world happy."

KILLING THE PLANT INSECTS.—I am going to tell you something about the pests to my plants, in the shape of both white and red worms in the earth, and green and black or brown flies, and green lice on the plants, and the only way I can keep them in subjection is to pour strong tobacco tea on the earth and roots, and smoke the plants once a week. My plan is to put the pots of plants on the kitchen table, cover with a sheet, place a few coals on a shovel upon which sprinkle dampened tobacco, and hold under the sheet. Nothing has been injured by this treatment, except a beautiful Solanum jasminoides, and it nearly killed that. I should prefer to use something less offensive to myself if I knew what.—MRS. A. W. K., *Keeseville, N. Y.*

CHRISTMAS ROSE BLOOMS MADE WHITE.

In the majority of gardens there are no white flowers out-of-door to speak of in winter, with the exception of that most useful of all flowers, the common Christmas Rose (Helleborus niger.) The large-flowered variety of this is quite a mistake for decorative purposes. I fancy I have seen a small-blossomed sort, and that is really what is wanted—a Christmas Rose half the size of the ordinary kind, not one nearly as large again. But the Christmas Roses with which one meets in the majority of gardens are not white, but pink, or more or less suffused with pink or a dirty purple, and as this is the white flower within the reach of all which I venture to recommend, it is only reasonable that the way to make it white should be first pointed out. Well, there are two ways within reach of most people; some would add a third, and plant it in light soil, but that is not effectual, and is often impossible. So it will be best only to advert to the two modes of making the Christmas Rose white. The first is to plant it in a warm, sheltered, partially-shaded situation; this seldom fails. It is the cold wind chiefly that makes this white flower pink or purple. I have patches of it in my mind's eye as white as driven snow behind walls, or fences, or snug on the sheltered side of shrubberies; and others nearly all purple, set in the teeth of the wind, or rudely swept by the blast. My next mode of insuring white Christmas Roses is to cover them with glass; this does not mean a wooden box and glass light, far less the lifting of the plants and placing them in pits, frames, or houses. Such disturbances are ruinous to the perpetual supply of Christmas Roses; but the flimsiest means of protection with glass, such as the placing a few bricks on either side of a patch of Christmas Roses, and then laying a a loose square or two of glass over from one to the other. Such cold and simple protection is sufficient to make Christmas Roses spotless as the driven snow. One of the finest examples of the success of such glass protection which I have ever seen was a border at the end of a green-house planted with Christmas Roses about one foot apart. A few long squares of glass were laid across, and in the middle of January the ground was as white with Christmas Roses as an old orchard is with Snow-drops in February. Blooms had been cut from them since Christmas, and hundreds might have been cut when I saw them, and all without a spot. In fact, flowers of them in the drawing-room were so pure and spotless, that they were mistaken at a distance for the more rare but hardly more beautiful Eucharis Amazonica. Christmas Roses also flower much more freely under slight protection than when exposed. This plantation of them had been treated in the way just named for years, care being taken neither to plant nor sow anything among them in summer, to allow no treading on their crowns, and to cover them with glass by November 1. Thus managed, they were always in flower before Christmas, and continued in flower till the first week in February, soon after which the glass was removed.—D. T. Fish, *in the Garden.*

The Progress of Botany.—A Belgian journal of Horticulture has given some curious figures showing the rapid increase in our knowledge of the vegetable kingdom. In the Bible about 100 plants are alluded to; Hippocrates mentioned 234; Theophrastus, 500; and Pliny, 800. From this time there was little addition to our knowledge until the Renaissance. In the beginning of the fifteenth century Gesner could only enumerate 800, but at its close Bauhin described 6000. Tournefort, in 1694, recognized 10,146 species; but Linnæus, in the next century, working more cautiously, defined only 7294. In the beginning of this century, in 1805, Persoon described 25,000 species, comprising, however, numerous minute fungi. In 1819, DeCandolle estimated the known species at 30,000. Loudon, in 1839, gave 31,731 species, and in 1846, Prof. Lindley enumerated 66,435 dicotyledons, and 13,952 monocotyledons —in all 80,387; but in 1853 these had increased to 92,920, and in 1863 Bentley estimated the known species at 125,000.—*Lancet.*

HOW TO USE SOOT.

That soot is of great value when judiciously applied to plants, and that it is also a powerful antidote against the ravages of reptile and insect life there cannot be the slightest doubt, and yet we sometimes see this valuable fertilizing and purifying agent treated as though it were poisonous (which it verily is, owing to its burnt properties, in the hands of those unacquainted with its proper application) to vegetable life, and hence its consignment to some out-of-the-way place. Thinking, therefore, a few remarks upon its use *apropos* just now, the time of seed sowing, these notes are penned in the hope that they may be of some little use to a few of those of your readers who are uninitiated in the use of soot. In all establishments soot may be had more or less abundantly, and in large places the supply is considerable, and should always find its way to a dry corner in one of the garden sheds, for if left exposed to inclement weather it loses its virtue. On the 9th of this month, when getting in our Onions, we used several barrowloads of soot in this way. When the ground has been trodden or rolled and raked level, the soot, which in the meantime has been passed through a quarter or half-inch sieve, is spread broadcast in sufficient quantity to cover the ground lightly, when the drills are drawn a foot apart and the seed sown in the usual way, and thus the crop is ensured against the ravages of worms. The same applies in the same way to Turnips, Parsnips, Carrots, and all crops liable to the attacks of worms. I have used it for the above crops for several years with satisfactory results. Again, soot comes into use in a double capacity when used in a liquid state, as it drives worms out of the balls of plants growing in tubs or pots, and at the same time acts as a fertilizing agent to the plants. For this purpose we tie up three or four pounds of soot in a piece of coarse cloth, which we dip and squeeze in the water-tub until the water has become thoroughly discolored; smaller quantities can be used for smaller vessels. Then, again, soot can be used with good effect on the Peach and Nectarine, and other walls, mixed with limewash — say eight or nine handfuls of soot and one handful of sulphur to an ordinary sized four gallon galvanized bucket of limewash, and applied with a whitewash brush, and dabbed well into all the crevices of the wall to the detriment of all insect life. A dusting of dry soot immediately over the drainge of pots which are to be plunged in beds of fermenting material, will for some time prevent the ingress of worms. In like manner if soot and lime in proportion be dusted over young crops just coming up of the Brassica tribe when damp, they will be saved from the ravages of birds and flies and slugs. Soot will also do good service if a solution of it, and lime in proportion, be applied with the garden-engine to old Apple trees infested with lichen. We use it in our orchard, as above described, every year with good effect; trees that were heavily coated with moss six or seven years ago are now comparatively clean. Soot can also be applied with an equal quantity of light mould as a top-dressing to an impoverished lawn with beneficial results. A corner of the lawn left undressed will be the best proof, if any is required, of its fertilizing properties, at least such is the opinion, founded upon practical experience and satisfactory results, of — H. W. WARD, *in Gardeners' Chronicle.*

SPARROWS IN AMERICA.

Sparrows, since their introduction into America, have, it seems, been petted and fed regularly by the authorities in the cities and large towns, under the impression that when they increased in numbers they would keep down the legions of caterpillars and canker-worms that infest the trees in the public parks. It is, however, reported that the caterpillars and larvæ are left to multiply on the trees untouched by the Sparrows, and that they are as busy amongst the buds of fruit trees and in wheat fields as in the old country. They are also said to drive away all the native song-birds, such as the Baltimore and Orchard Orioles, Blue-birds, Purple Martins and Cat-birds. Mr. ALLEN, one of the most celebrated of American ornithologists, states "that the rapid increase of the Sparrows in America will soon call for legislative action to hold them in check, and that the introduced Sparrow is to a greater degree granivorous than most of our own species of the same family, and subsists only upon an insect diet exceptionally. With their known predilection for the buds of fruit trees and for ripening grain—to say nothing of other depredations they are known to commit, respecting which we have testimony from the Old World as well as at home — have we not burdened ourselves with a tenfold worse pest than the caterpillars prove to be? The Sparrows are hence a needless and deleterious addition to our fauna it may be no easy task to eradicate. Instead of being pampered and protected, they should be, if not at once expelled, at least left to take their chances in the struggle for existence without the advantage of the shelter and food now furnished so abundantly for them by unwise human foresight." It may be remembered that, in one of the back numbers of *The Garden*, I mentioned that the introduction of the Sparrow into America would turn out to be a great mistake, and they are now finding this out. —WILLIAM TILLERY.

CELERIAC, OR TURNIP-ROOTED CELERY.

Of vegetables used in foreign countries large quantities are not worth growing in England, but the Celeriac is an exception. It may be found in a few large establishments in this country, but its culture ought to be extended to even the smallest gardens, on account of its fine flavor. It is by no means difficult to grow, and it is one of the most useful of winter vegetables, coming into use, as it does, when the kitchen garden is almost bare. On the Continent it is met with on every table, and is considered a welcome delicacy. It forms an irregular, globular, Turnip-like root or knob from two to three inches in diameter. It is brown on the outside, but the flesh is white, tender, and very pungent.

As regards its use, cut off the leaves, remove all irregular knobs, give the root a hard crushing in clean water, and it will be ready for the cook. In a raw state, cut it into thin slices; it forms a good addition to winter salads. Cut in pieces one-third of an inch thick, and when boiled, fried with butter and served with sauce, is the general way in which it is put on French tables. Boiled as above and made into salad, with salt, pepper, oil, and vinegar, like Potatoes, is the chief way in which it is used in Germany. —D. GUIHENEUF.

CULTURE OF EUCHARIS AMAZONICA.

This grand Lily, which ranks among the very foremost of stove plants, seems to be very accommodating in its habits as regards culture, though doubtless there is a right and wrong way of growing it. Some succeed in getting the same plants to flower nearly all the year, by giving them liberal treatment and a constantly high temperature, while others aim only at having them in flower during the autumn and winter, at which periods this Lily is one of the best flowering plants we possess. Where there is an abundance of well matured plants, and it is not desired to have them all in flower at the same time, a portion of them may be retarded for succession by keeping them in a rather warm green-house or intermediate-house; but if they be subjected to a lower temperature than this for any length of time the foliage becomes yellow, and sometimes damps off, and the plants are permanently injured. The leaves should always be green and healthy. Plants thrive well in an ordinary stove temperature if shaded from bright sunshine in summer. If potted in February or March they will begin flowering in August, and continue to throw up blossom spikes for several months. The surest way, however, to produce good specimens and plenty of fine flowers is to grow them in bottom-heat —for a time, at least. Where a regular succession of flower has to be kept up, the roots should be potted and plunged at intervals of a month or so, and the period may be still further extended by the retarding process before mentioned after the plants are lifted out of the hot-bed. Should they be pot-bound, they should be shaken out, separated, and re-potted in good soil, placing the bulbs together somewhat thickly, and keeping the largest ones by themselves. They should then be plunged immediately in a bottom-heat of 75° or 80° and heated to a high and moist temperature. Growth will be rapid, and in about three months or a little more they will show flower, when they may be transferred to the stove or intermediate-house. Plants that are not re-potted should be top-dressed liberally, and the bulbs must be rather deeply covered. The best compost for them is turfy loam well chopped up, and leaf-mold and sand, about two-thirds of loam to one of leaf-mold and sand, according as the loam is heavy or light. Frequent waterings with liquid manure will greatly benefit the plants during their season of growth, and they must at all times have plenty of water, and be shaded from strong sunshine.—*London Garden.*

RURAL EDUCATION IN FRANCE.—Mr. ROGER LEIGH, in an address recently given at a Harvest Celebration, gave an interesting description of the course adopted with respect to rural teaching in France, pointing out that the children attending thirty thousand primary schools in the rural districts received instruction in the culture of the soil. The child was shown the soil which best suited the plant to be cultivated; he was made to prepare it for planting, to sow it, to free it from weeds, to wage war against insects and grubs, and finally to record in his school books the advantages derived from the selection of special soils, the application of new manures and variations in the time of planting. Those lessons were never forgotten, and the allotment of the French peasant was made to produce a variety of vegetables fit for any man's table. The various agricultural societies throughout France cordially seconded the government in its efforts, by bestowing on the pupils and the master, counsel, assistance and prizes.

BAD SPRING WEATHER.—Some of the foreign papers complain sorely of the severity of the spring weather, which, after so mild a winter, has much damaged the fruit trees when in flower.

AN infusion of the flowers of the Linden is much used on the continent, being considered good in vertigo and spasms, and against coughs, for its expectorant properties.

FLOWERS FOR THE PEOPLE.

Our readers know how earnestly we have labored to encourage the culture of flowers, being especially anxious that the young, and the poor and unfortunate should learn something of the soothing, refining and enriching power of beauty. Sometimes, but not very often, we have felt almost discouraged, ready to believe for a moment that we were laboring in vain and almost alone. The Massachusetts Horticultural Society, one of the noblest and wealthiest institutions in the country, has engaged in this work at last.

At a meeting recently held, several ministers and gentlemen presented a request that the Society offer prizes for Window Gardening, and conduct all the business of advertising, exhibiting, and awarding the prizes, necessary to ensure success, when it was voted unanimously to co-operate with those interested in the subject of the communication.

A Special Committee being appointed to act with the Standing Committee on Flowers and Plants, this body, after consulting those persons whose avocations gave them experience and judgment in the matter, prepared a list of prizes, which the Committee say are "especially intended to promote a love for flowers and their culture among those who have little or no opportunity to grow them except in windows. The experiment is a new one in our country, and will need thoughtful care and patience from all who are in any way interested, that it may prove a blessing to those whose lives, at the best, are none too bright."

Three prizes are offered for each class:—First, $1.00; Second, 75 cents; Third, 50 cents; except in a few cases specified.

Roses—For the best six plants, in pots, of different varieties, $2.00, $1.50, $1.00; for the best single plant, in pot, $1.00, 75 cents, 50 cents.

For the best two plants in pots, of

Geraniums — Zonale and Sweet Scented.

For the best single plant in pots, of

Geraniums (Bronze, Tricolor and Ivy Leaved;) Abutilon, Hydrangea, Heliotrope, Begonia, Calceolaria, Cineraria, Fuchsia, Primula, Calla, Oxalis, Mimosa, Coleus, Carnation or Pink, Tradescantia, German Ivy (Senecio,) English Ivy, Lobelia, Agave, Cactus, Mesembryanthemum, Houseleek (Sempervivum,) Sedum, Bridal Rose (Rubus rosæfolius,) and Chrysanthemum.

Pansies—Best collection in box.

Ferns — Best six plants in box, $2.00, $1.50, $1.00; best three plants in box, $1.50, $1.00, 75 cents; best single plant in box or pot, $1.00, 75 cents, 50 cents.

PRIZES FOR ANNUALS.

Best single pot or box. Two prizes offered for each class. First, 75 cents; Second, 50 cents.

Alyssum (Sweet,) Balsam, Candytuft, Dianthus, Petunia, Phlox Drummondii, Stocks (Ten Weeks,) Verbena and Mignonette.

SPECIAL PRIZES.

For the best collection of plants, other than Annuals, grown in a window box not exceeding thirty inches in length and twelve inches in breadth, three prizes, $2.00, $1.50, $1.00.

For the best collection of Annuals, grown in a window box not exceeding thirty inches in length and twelve in breadth, three prizes, $2.00, $1.50, $1.00.

For the best collection of Cut Native Flowers, on Saturday, July 13, seven prizes, from $2.00 to 50 cents.

For the best Hanging Basket or Pot, three prizes, $1.00, 75 cents, 50 cents.

Exhibitions of the above-mentioned plants will be held at Horticultural Hall, Tremont-street, Boston, on the first Saturdays in June, July, August and September, at which gratuities in money will be awarded for the best specimens. On Saturday, July 13, an exhibition of Native Flowers will be held, and prizes for the same awarded. On Saturday, July 14, there will be an exhibition of all the plants on the above list, for which prizes will be awarded.

Admittance to these exhibitions will be free to all persons. All prizes and gratuities will be paid at the close of the exhibition at which they are awarded.

All persons desiring to aid in this work by contributing plants (which should be in four-inch pots,) are earnestly requested to notify the Secretary of the Committee on Window Gardening, at Horticultural Hall.

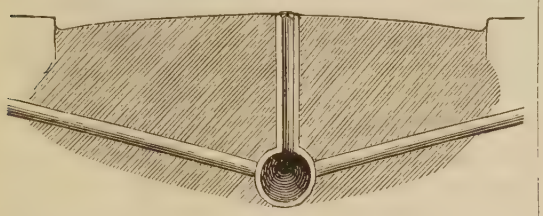
Pastors of Mission Churches, and Superintendents of Mission Schools, desiring plants for distribution, can make application at the same place.

We rejoice that the good work has at last commenced so auspiciously, and in the city of Boston, and under the control of an organization possessing all the intelligence, energy and means necessary to insure success. All honor to the good ministers and gentlemen who prompted the Society to do this work, and to the Association that responded so nobly. This is only the beginning, and the end will be glorious.

SEWAGE.

MR. EDITOR:—I live in a city, though not a large one, and on passing along some of the streets am sorely annoyed by the gas from sewers coming up at the edge of the side-walks, from the openings left for the surface water to enter. Don't you think there should be stench traps, to prevent the escape of the foul gases? I am not only annoyed, but sickened by the offensive things. These sewers cause disease, sorrow and death.—A PASTOR.

Truly, sewers are a fertile source of suffering, sorrow and death; but the remedy proposed is not the proper one, in our judgment. It is



impossible to confine the foul gases to the sewers. It will escape, and the only question is whether it shall do so into the street, where it may mix with the air and do as little injury as possible, or into our bed-rooms and bath-rooms, where it will do the greatest possible amount of mischief. Have as little connection with sewers as possible, and trap these connections with the greatest care, and allow the gases to escape into the street. All sewers should have openings for ventilation in the center of the streets, at street crossings, etc., as shown in our engraving. A basket of fresh charcoal placed at these openings every day or two would absorb a large quantity of foul gas. In some countries, for the ventilation of large sewers fires are made at the openings, a most efficient means of securing thorough ventilation.

Yellow Abronia.—I wrote last year to inquire the reason of Abronia arenaria failing to bloom, while A. umbellata flourished. I fail to find any explanation from you in any of your Catalogues or numbers of your new MAGAZINE, so repeat my desire to learn the cause of my failure to get blossoms of the yellow kind, when I succeed so nicely with the pink variety year after year. I yet hope to get word from you in some way in regard to it. At the same time I order a packet of the seed and will try again, as I fully agree with you that the failures are generally attributable to the amateur gardener.—A. P. H., *Boston, Mass.*

Acres of the Abronia arenaria we have seen growing and flowering luxuriantly on the shores of the Pacific, on the little hills formed by the floating sands, and within fifty feet of high water. Try a sandy soil.

I enclose a leaf of an evergreen vine which I would like to know the name of. It is a leaf climber, and has flowers very much like Potato blossoms. Also, please tell in the MONTHLY the name of the little flower enclosed.—Mrs. T. J. GREEN, *Kelseyville, Lake Co.: Cal.*

The vine is *Solanum Jasminoides*, and the little flower is *Dodecatheon Meadia*.

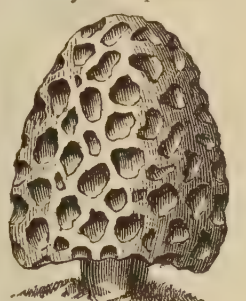
Hyacinths.—Last season I purchased a lot of Hyacinth bulbs that bloomed beautifully, many of the stalks having from twenty to twenty-five bells upon them. When they finished blooming, and the tops died down, I took up the bulbs, dried and put them away in a dry place. When planting time came last fall the bulbs seemed to be in fine condition, and put up very luxurious tops, but the blooms were without exception a failure, many of the stalks having two, three or four bells upon them, and none more than six or eight. Now, I ask what is the proper course to pursue with them to prevent a recurrence of the facts above stated. An imported bulb should certainly bloom handsomely more than once.—C. B. G., *Columbus, Ga.*

The Hyacinths do not usually degenerate quite so fast, but if really good flowers are desired, imported bulbs must be planted every year. The treatment seems to have been unexceptionable.

Best Gladiolus — Beauty and Cost. — Will Mr. VICK please give the names of the six Gladiolus in the March MONTHLY? Also, six of your finest Gladiolus, not too expensive, and oblige,—MRS. E. H. N., *Cleveland, Ohio.*

The Gladioli figured in our March number are very good kinds, and were selected for painting because uniting both beauty and cheapness. The most expensive variety, Cleopatra, costs only thirty-five cents; and the cheapest, Calypso, 15 cents, while the cost of the six is only $1.25. The names are as follows: Calypso, Cleopatra, Agatha, Eldorado, James Carter and Lord Byron. For six very fine varieties, of a higher price because newer sorts, and of extra quality, we can recommend, Addison, Eugene Scribe, Etendard, La Fiance, Meyerbeer and Rossini. This six is advertised for about $3.00.

The Mushroom.—With the enclosed from my wife I intended sending you a Mushroom of our wild kind. They are shaped like an egg, usually a little larger than a hen's egg. When cooked they have a taste that reminds one of oysters. I will send you a specimen as soon as I get one that suits me. In the meantime I would like to know how to get the spawn of these. If it is not a secret of the trade, please inform me, when you receive one from me.—J. S. AKIN, *Carlisle, Ind.*



MOREL (MORCHELLA ESCULENTA.)

Your Mushroom is the *Morel* (*Morchella esculenta.*) It is an excellent variety and may be dried and kept for any length of time without the least injury to its flavor. The Morel is only found in the spring of the year in thin woods, or near them where the ground is light, or in orchards. We have found them here for several seasons, but do not think it has been cultivated, or that the spawn can be obtained in the market.

JERUSALEM ARTICHOKE.

MR. EDITOR:—Will you please tell us something about the *Jerusalem Artichoke?* Is it the same as the *Brazilian*, and what is the difference between that and the *Globe?* We have had a little discussion on the subject, and it seems that we have become some "mixed" in regard to the matter. I have the common Artichoke, and one of my neighbors, an "old-countryman," declares it is no Artichoke at all, as the part of the Artichoke that is eaten is above the ground, and not below, like a potato.—INQUIRER.

The Artichoke commonly known as the Jerusalem, and sometimes called Brazilian, is the

same. It was thought to have originated in Brazil, and hence this name. A climbing variety, a native of Brazil, is also described in the books, but it certainly is not common. The term "Jerusalem" is supposed to be a corruption of the Italian name, which has somewhat the same sound. The true title of this plant is *Helianthus tuberosus.* Its habit and flower is much like the Sunflower, while large numbers of tubers are found at the base, as shown in the engraving. The Artichoke will succeed in almost any soil, but that which is rather light is the best. Plant the tubers or portions of tubers like potatoes. If any calamity should destroy the Potato, the Artichoke would assume an importance to which it is not at present entitled. For a quarter of a century and more the papers have recommended this plant for feeding, but without much success. Once planted, it is almost impossible to be rid of it; for every little particle of a tuber will survive the winter and grow. As frost does not injure the roots, digging can be done either in the autumn or spring.

The Globe Artichoke is a different plant entirely, growing four or five feet in height, and branching. The edible portion is the cluster of buds or flower-heads, the scales of which are cooked and eaten, and in flavor are something like Asparagus. The latter engraving shows the scaly flower-head.

Shade and Shelter for Pansies — Hanging Baskets.—I would like a little information through the MONTHLY about the treatment of Pansies. Do they require a great deal of shade? For the last few years we have had very good success with the little beauties. Last summer it was very dry in this section through July and August, and the plants did not seem to revive when the fall rains began. What kind of covering should be used in the winter to protect them? What kind of soil do you think best for Pansies? Should hanging baskets be turned around every day?—MRS. T. B., *Gurney, Ill.*

A little shade will not be objectionable, but if too much the plants become "drawn,"—that is, slender and weak. The Pansy will not flourish in hot, dry weather, and in some seasons, when both heat and drouth are extreme, the plants suffer so severely as to be past recovery in the seasonable weather of the autumn. The most favorable soil is one that is cool and moist. If too heavy a covering is given the plants will rot. A light covering of straw or very coarse manure, something, at least, that will admit air freely, is the best. Hanging baskets may be placed in situations where occasional turning will be of advantage, but it is not always necessary. If plants on one side seem to suffer for want of light, it will be well to change frequently.

NARCISSUS.

MR. EDITOR :—Will you please give in the MAGAZINE the name of the flower I have this day sent you in a small paper box, with my name on the outside. Some call it a Daffodil, and others say it is a Hoop Skirt flower. It seems to me everybody should know that the Daffodil is a double flower, while this is single, and as for a Hoop Skirt, a flower like this grew in my mother's garden before a Hoop Skirt was even thought of. — MARINDA S. M.

Our correspondent has our best thanks for attaching her name to the box containing the flower. Some days we receive a dozen packages enclosing flowers or plants without any name or mark to show by whom they were forwarded. About the same time the mails bring us as many letters, saying in substance — "I send you some flowers by this mail. Please let me know their names." Readers can imagine how badly we are puzzled, and how impossible it often is to give the desired information.

The flower received with the above note is the *Trumpet Narcissus*, sometimes called *Hooped-Petticoat Narcissus*, though this variety is a

TRUMPET NARCISSUS.

little different, the trumpet or bell being shorter and more open. This Narcissus has been known for a century and more, and the newest fashions in ladies' apparel are only old and often ridiculous customs revived. There is both a white and yellow Trumpet Narcissus, the *Gold* and *Silver Trumpet*. The Daffodil is also a species of Narcissus, but it is double, as stated by our correspondent, and its true name among florists is *Narcissus Van Sion*. All are very desirable early spring flowers. Bulbs must be planted in the autumn, and will flower the first spring, and continue without removal for several years. When they become too thick, take up the bulbs after the leaves ripen and replant.

In this connection, perhaps, we may as well state a fact that we designed to give in another article, that the Narcissus abounds in Palestine, and that it is the opinion of the best scholars and travelers that this flower is the *Rose of Sharon* of the Scriptures. In the last quarterly report of the English "Palestine Exploration Fund," occurs the following interesting note by Lieutenant CONDER, on "the Rose of Sharon." Remarking that the question of the proper translation of the word *Habatstseleth*, rendered "rose" in the English version, has never been settled with certainty, he says:

"The word in Hebrew comes from the root *Batzl*, 'bulbous,' from which it has been generally concluded that some kind of Lily was intended, and a great many species have been proposed.

"The Targums translate the word by *Narkus*, the Narcissus, which is not only of the Lily tribe, but also a plant very common in spring in the Plain of Sharon.

"Roses are not found in Palestine, though the Dog-rose flourishes on Hermon in the cooler atmosphere 6,000 feet above the sea, and in the Anti-Lebanon. It seems improbable that the climate of the lower regions can ever have been fitted for Roses.

"We found that the name *Buseil* was applied to one plant only in Palestine, and that plant is the Narcissus. This is confirmed by M. BERGHEIM, of Abu Shusheh, whose acquaintance with the peasant language is intimate.

"The agreement between the modern name and the Jewish tradition of the meaning of the word used in the Bible, seems perhaps sufficient to identify the Rose of Sharon with the beautiful white Narcissus which covers the low hills in spring, and is also found on the plain."

Mangel and Swede Turnips.—How late can I sow Mangels and Swedish Turnips, or Ruta Bagas, with a fair prospect of obtaining a crop? I cannot sow until about the first of June, will that answer?—T. J., *Mich.*

With a fair season you will not have the least difficulty in obtaining a crop of either by sowing the first of June, if your soil is in good condition. The best crop of Mangels we saw last year were sown early in June, the 5th, if we remember correctly. If your roots should not grow as large as they would have done with earlier sowing, they will be more solid, and perhaps contain quite as much nutriment. If the weather should prove dry give extra good culture. Stir the ground well and often. Many a crop of roots has been saved in a dry time by extra culture.

THE SPARROWS.

The American people are nothing if not extravagant. Extravagance of expression characterizes alike the people and the press. The leading politician, if on our side, is almost a God; if on the other, quite a Demon. The SPARROWS must be secured to America at any cost, or ruin awaited us. The insects were increasing with fearful rapidity, destroying every green thing, and the great *insect eater*, the Sparrow, was our only Savior. So the Sparrows came, and for some years were the pets of people and cities. The disgusting insects disappeared from the trees like the April frost before the rising sun. The Sparrows were an *unmitigated good.* NOW, they are not insect eaters at all, but destroyers of grain and fruit buds. In short, an *unmitigated evil*, both and all of which we believe to be false. We did not urge the importation of Sparrows to this country, knowing they were not without faults, nor do we intend to join the senseless raid against them, nor shall we echo the false charges with which the press is now ringing. Without one particle of proof, they are accused of a score of faults, and among others of driving away other and better birds, convicted and condemned, and their destruction recommended. "The song of the Robin will no more be heard in the land," exclaims one plaintive writer, as the Sparrow is driving him for shelter from city to country, and from the country to the remotest forests. Only last Sunday, we were amused for some time in watching a fine red-breasted Robin driving a Sparrow from every little seed or crumb that he endeavored to appropriate. In our *Foreign Notes* we give the opinions of an American and English writer, and above is our own.

Currant Worm.—In your next please tell us how to care for our Currant bushes. In the season they sprout out well and fruit nicely; but just as we are counting on heavy returns a little worm comes and eats all the leaves, and the Currants dry and fall away.—J. W. K., *Humboldt, Mich.*

As soon as this worm appears you must obtain Black Hellebore from the druggist's, and dust it upon the leaves. It is certain death to the worm. Repeat the operation two or three times during the season. They have been almost driven out of this section by vigorous doses of Hellebore. Use with caution, as it is poisonous.

Fruit Tree Agents.—MR. VICK:—Men calling themselves your Agents are selling fruit trees in your name. I have learned that some of them have never seen your place.—J. S., *Warren, Ohio.*

Any one selling fruit trees and claiming to be my Agent is a fraud. I do not deal in fruit trees, and have no Agent.

PERSIAN INSECT POWDER.—The preventive known under the name of "Persian Insect Powder," well known also in this country and much used as a remedy for the destruction of troublesome insects, has nothing whatever to do with Persia, but originated in the Russian provinces of Caucasus. The genuine article is composed of the pulverised blossoms of Pyrethrum roseum and Pyrethrum carneum. On account of the extraordinary demand for it, however, it is seldom found to be genuine, but is generally made of the blossoms of similar plants, or plants of the same family which have no insect-destroying property, or only in a less degree. For instance, pulverised Camomile is sold for "Persian Insect Powder," but it can easily be detected by the odor, as the genuine article has no odor. The great demand for the powder has in many places caused the cultivation of Pyrethrum roseum and Pyrethrum carneum, and generally with great success.—F. G., *Reading, Pa.*

SCALE INSECT.—Finding many useful things in your MAGAZINE, that are helps in contending with the various enemies of plant culture, will you allow me to give you my experience in the treatment of the White Scale on the Oleander. I had a fine large one so covered with the Scale as to be unsightly; many remedies had been tried before, and as a last resort I tried Paris Green, as prepared in water for the Potato bug. It was thoroughly sprinkled with a whisk broom several times during the summer, and seemed to have effectually destroyed them without injury to the plant. It is now in bud, and I see no traces of that enemy; still, when it is put out of doors I shall have it used again as a preventive.—A LOVER OF THE OLEANDER, *Nunda, N. Y.*

"A MAJESTIC TULIP."—One of the editors of the *Northern Christian Advocate*, of Syracuse, N. Y., to whom we sent a few Tulip bulbs, as is our custom, wrote as follows on the 26th of April: "One of the Single Early Tulips you sent me in the autumn of 1876 now has a blossom whose petals measure four and three sixteenth inches in length. It is a majestic flower, quite worthy of its name, *Grand Duke of Russia.* Last year the petals measured a trifle over three inches."

PELLÆA ANDROMEDÆFOLIA.—In answer to S. W. in May number of the MAGAZINE, page 153, a specimen of Fern was mentioned as Andromedæfolia, unintentionally omitting the name of the genus, Pellæa.

STERN INTEGRITY.

There is a good deal of downright honesty in the world, no matter what people may think or say. In March, 1875, we sent out thousands of packages of seeds to the grasshopper sufferers, accompanied by the following circular.

Seeds for Grasshopper Sufferers.— From every place where people are suffering from the ravages of Grasshoppers I have had applications for Seeds in large numbers — by thousands. I have, therefore, had put up a nice collection of selected GARDEN SEEDS for family use, and mostly early kinds that will soon come into use, and thus furnish food as soon as practicable. The value of these packages, of which I have had several thousands put up, and one of which I send you, is $2.25 each. The seeds are fresh and pure. Please give them a fair chance, and they will give you a good reward in food and pleasure. I make a charge of $2.00 against you for these seeds. If you can spare a part of it now, send it on, as it will assist us in aiding others; if not, we will wait until after harvest, and if you are not able then to meet the demand, all right; we will not ask for it, but will get out a judgment against the grasshoppers, that will, perhaps, settle them forever. — Yours, &c., JAMES VICK.

Scarcely a week has passed since that time without bringing us some returns, both in thanks and money, from those we endeavored to help in a time of trouble, like the following:

MR. JAMES VICK: — *Dear Sir:* — It has been a long time since you sent me those seeds, when the grasshoppers destroyed everything in Kansas, and I now forward the money. I am very much obliged to you for your timely consideration of us poor people. It was a great benefit to us. — M. C., *Farragut, Iowa, May 2d, 1878.*

Samphire. — MR. VICK: — You might have said to your correspondent who inquires about Samphire and where it grows, that the salt marshes around Onondaga Lake, near Syracuse, are full of this curious plant. The people here gather it in large quantities for pickling. On the Geddes side of the lake there is a meadow of it — I should say thirty acres. The soil is hard packed sand, saturated, of course, with brine. One evening in October last year, this meadow presented a most beautiful appearance just at sunset. In patches there were all shades of tint, from dark green to wine, on one hand, and to yellow on the other. These colors, mingling in irregular order and slopes, gave the appearance of a huge oil painting. The plant has an intense flavor of salt. It could be obtained and moved with very slight trouble. — J. T. R., *Syracuse, N. Y.*

The Samphire to which we alluded, and to which we suppose our correspondent referred, is found only, we think, on the sea coast of Europe, generally on the chalk cliffs. It is *Crithmum maritimum.* The plant called Samphire, which is found in salt marshes and near salt springs in this country, is *Salicornia herbacea.*

PANSIES IN ILLINOIS. — My Pansies have been lovely all winter in a frame out-doors — not a green-house. I have picked flowers every month except March, and could have done so then only for the snow. We picked for Easter Sunday, so it paid for waiting, and they were just lovely. — G., *Oak Park, Ill.*

Cauliflower, Tomatoes and Radishes.— Will you please answer me some questions through your MAGAZINE. 1. I wish to grow both Cauliflower and Cabbage seed, and have to set them out within a short distance of each other, is it possible for them to mix? 2. Suppose, among Tomato plants of different varieties, I find one plant that has extra fine Tomatoes: what are the chances to save seed from this plant that will bring plants of the same variety? 3. How can I grow Radishes free from worms? — G. W. BOYNTON, *Auburn, N. Y.*

Cabbage and Cauliflower are so nearly allied that there is not only a possibility but a probability that the Cauliflower seed grown in the neighborhood of Cabbage, as suggested by our correspondent, would be mixed. 2. The way to improve or even keep up the character of any vegetable is to save seed from the earliest and best specimens. This we always do. In some cases it is best to destroy every plant growing near the choice specimens to prevent mixture. Where a plant shows unusual good qualities we take it up with great care and remove it to a green-house, where it can by no possibility be injured by the pollen of other plants, and here it blooms and bears its fruit. 3. Radishes need a warm, rich soil, and must make a rapid growth, or they are woody, wormy and worthless. A load of fresh soil from the woods, if it can be obtained, makes an excellent top-dressing for a Radish bed, and almost insures a good crop.

Liverwort.— In the February number of the MAGAZINE the Liverworts are mentioned among the plants that never flower. I have had plants in my garden for years, that I have always called Liverworts, and they bear the prettiest early May flowers — pink white and blue. They are not quite open yet, (March 18.) The Eschscholtzia Californica has passed through the winter in the open ground without receiving injury. — *Watson Creek, Minn.*

The Liverwort you have is an *Hepatica,* commonly called Liverwort, but does not belong to the Liverwort family, which are flowerless and below the mosses in their *organization.* The winter has been so mild all over the country that we are prepared for such statements as that the Eschscholtzia has endured a Minnesota winter. We know of Sweet Peas in this neighborhood that passed the winter in the garden as pleasantly and safely as though they had been nursed in a conservatory.

CHOICE SEEDS. — The experience of many years has amply proved to me that when I have a few seeds of some choice flowers I have greater success in raising them by sowing in shallow boxes, and placing them in the windows of the kitchen or sitting-room. Especially if the seeds are small the chances to succeed are much greater than in the hot-bed. In the open ground, with such seed, I have nothing but failures to record. — AJAX.

NOTES ON THE CALLA.

Forcing the Calla.—Can you tell me how to treat a Calla? A friend of mine took a young one from the side of a large one, and in six months it blossomed, by setting it on a hot soap stone every day and putting on hot water. Should the pot be a third full of manure for a "bottom heat," as some say? Is it a good plan to force them with hot water, &c., and is it the proper way to remove young ones as soon as they appear, or let them grow with the old one?—MRS. J. E. J., *Addison, N. Y.*

The Calla is a native of a warm country, and likes warm treatment, as every one will believe who has seen them growing rampant in southern California. Watering with warm water hastens growth, and also causes early and free flowering. The manure that could be compressed into a pot would furnish so little heat, and that for so short a season, that it would be of little advantage. Where there is plenty of room, as in a tub, the young plants may be allowed to remain and form a clump or mass. In southern countries we have seen masses yards in diameter. In pot culture it is best to remove the young plants.

Large Calla.—In the year 1875 I purchased a Calla bulb, and the following spring it grew well but gave no flower. In the spring of last year it had two blossoms, one about six weeks after the other. I kept it growing all summer, moved it into a size larger pot in the fall, and this spring it has four blossoms. The first that opened is now fading and ought to be cut off, the second now out full, and two buds nearly ready to open. It is the largest Calla both in its leaves, stalks and flowers, I ever saw. Is it not uncommon for a Calla to produce four blossoms at the same time?—E. A., *Brighton, Ill.*

This shows the good effects of a little patience and fair treatment. Almost everyone wants flowers immediately after securing a plant or bulb, not waiting even a reasonable time for growth and development. It is a good Calla that produces four flowers at once, but in California they grow to such an immense size that we would not like tell how large, nor how many flowers they bear, because some might think we were romancing.

Preserving Dutch Bulbs During Summer.—Will you advise me how to preserve Tulip, Hyacinth and Narcissus bulbs through the summer, and oblige MRS. R. S., *Lehi, Utah.*

The bulbs may be planted in the open ground as soon as they are over flowering in the house, and here they may remain until time to pot for winter flowering. Hyacinths that have flowered once in the house are not of much value for house culture, and this is particularly so if flowered in water. Bulbs that have flowered in the garden need not be taken up unless the room they occupy is needed. Bulbs of either the Hyacinth, Tulip or Narcissus may be taken up as soon as the leaves ripen and die, and can be kept dry until time for autumn planting without the least injury.

What Killed the Carnations?—In the spring of 1876 my mother gave me four of your Carnation plants, because I wanted some for my own garden. The latter part of the summer they flowered, I think in August, but did not have many flowers. Last summer the flowers came earlier, and plenty of them, and the plants were large and strong, but this spring my plants are all dead or as bad as dead. I don't think they will ever live to flower again. Now, ought they to die? I threw a little, just a little, straw over them both winters. An old gardener told me just a little straw would do them good, but too much would injure them. Please tell me. —FRANK.

Your plants, in the winter of 1876-7, were young and vigorous, and had given but few flowers. They were, no doubt, round and compact, and the branches short. In 1877-8 the plants were old and weakened by free-flowering in the summer. The branches were long and weak and the plant had a straggling appearance, and was too old and weak to endure the winter. Only young plants are hardy. Sow seed occasionally to secure a stock of young plants, and an extra good flowering plant can be increased by layering.

Geraniums from Seed.—I wish to ask you if it is anything unusual for Geraniums to flower within six months from the time of sowing the seed. I have been in the habit of raising them from seed for the last ten or twelve years, (sowing in March or April,) and have never failed of having some of the plants bloom before frost. Last spring I transplanted over thirty from seed sown in March, and twenty-two of them were budded or in bloom the last week in August. The time has grown shorter each year, and I have supposed it was in consequence of my care in saving seed from only free-blooming varieties. From seed that I bought I seldom obtained any other color than scarlet, and that suggested the idea of saving my own. Those I exhibited at the Fair caused considerable discussion. The Superintendent told me, the general impression being that there was a mistake about the time of sowing the seed, and a professional florist was certain of it. I assured him that I knew the date to be correct, and he concluded that he would experiment a little himself, next season. I have a Cyclamen (blooming for the first time,) that produces bright pink flowers from one side of the bulb, and pure white from the other. It seems a curious freak to me, though it may not be uncommon. The bulb is still small, about an inch in diameter, and four others of the same age are not larger than hazelnuts.

With good seed there is no reason why a Geranium should not produce flowers in six months from sowing.

THE SIGNS OF THE ZODIAC AND THE MOON.—The signs of the Zodiac as affecting vegetation, especially in regard to the time of planting, and the influence of the moon, we have not yet learned much about; so we cannot answer our correspondent at Streator, Ill. As soon as we learn anything of value we shall certainly publish the facts.

DOUBLE CATCHFLY.—From Mr. TURNER, of Hartland, Vt., we have a very pretty double Catchfly.

THE HOLLYHOCK.

Old people know the old Hollyhock, with its pink and white and yellow flowers, about the shape and almost as large as a tea-cup. How fond the bees were of its abundant pollen, with which they would almost smother themselves, leaving loaded down so that they could scarcely fly, and as dusty as millers, if not captured by mischevious boys who often made them prisoners by closing the flower, the poor insect, like larger ones, being so absorbed in the gathering of wealth as to become an easy prey to the enemy.

What a favorite flower this was with the girls, to-be-sure. It seems only a few years ago, and it is in reality only about fifty, that we used to gather cap-fulls for the girls to string for necklaces. Indeed, when the flowers began to fade how wonderfully they turned to "cheeses," about as large as an old-fashioned penny, and these made about as pretty playthings as the flowers. Then the Hollyhock grew from six to ten feet in height, with its single flowers scattered sparsely up the tall stalk, and though not very brilliant or graceful there were situations in the garden where the Hollyhock of bygone days looked well; at least, we thought so then and cannot think otherwise now. We are quite sure, as a back-ground for flower beds, and for giving life to shrubbery, the old Hollyhock was a really valuable flower.

HOLLYHOCK PLANT.

Look, however, from our poor word picture to the much better one made by our artists and engravers. The single flower has become as double as a Rose, the plant has lost half its height and gained much more than this in beauty. The slender shaft has become a gorgeous mass of flowers, possessing more grace and beauty than art ever produced. In situations suitable for tall flowers, we know of nothing better than the Hollyhock; and yet the improved varieties do not grow very high, from three to four feet being about the average.

For the florist as well as the amateur, the flowers are useful, and can be used in various ways. No Rip Van Winkle, just awakened from a forty years' sleep, would recognize the modern Hollyhock as akin to any flower he had ever before beheld. Indeed, when made up in bouquets, pretty good judges are often at fault. A good, double, clear, white Hollyhock is a very good substitute for a Camellia or a white Rose, as a center of a bouquet. I do not now think of one as good, except the double white Balsam.

The true name of the Hollyhock is *Althæa rosea*, and it is supposed to be a native of China, from which country it was introduced into Europe about three hundred years ago. In regard to its origin, however, there seems to be some doubt, some authorities claiming Syria as its native land, while an old work on Gardening, in our possession, published a hundred and fifty years since, calls it the *Egyptian* Hollyhock.

Although cultivated so many years, only recently has the flower received the attention of florists, and become what is called a florist's flower. Now plants can be obtained of the choicest named sorts, while the best seeds will produce a good proportion of most excellent flowers, certainly more than seventy-five per cent. The Hollyhock flowers the second year from seed, and will do well about two years, when the plant, under ordinary treatment, becomes exhausted and worn out. If, however, seed is sown in the hot-bed or conservatory in February, and the plants are kept growing, flowers are produced the latter part of summer, though the plants will not have attained their full growth. If a portion of the flowering stems are removed as soon as they appear, the strength of the plant is reserved, and it can be kept vigorous a good many years. If allowed, however, to flower freely, two summers at most will exhaust the plant. The usual mode of culture is to sow seeds about the first of June in a seed-bed. An old cold-frame without glass is a good place, as the side boards afford a little protection, and a light covering can be given to protect from the hottest sun. When the plants have four or five leaves, transplant to the ground where they are to remain. If not too crowded in the seed-bed they may remain until autumn. A succession of young plants should be secured by growing a few seeds every season.

Our Colored Plate exhibits the flowers about one-third natural size, and of the most common colors. The habit of the plant is best seen in the little engraving on this page.

A MONTH IN THE COUNTRY.

CHAPTER III.

At the appointed time I cheerfully took my seat beside Uncle George, and we started for the bay.

About a mile from the parsonage, Uncle drew up by the side of the road to speak to two men who were setting fence posts, when the following funny conversation ensued.

The older man of the two, Dan L——, a big, rough, jocular fellow, cried out, "See here, Elder, it seems to me you preachers have a pretty easy time of it. On rainy days you stay in the house and enjoy yourselves, and on fine days you jump into the buggy and go driving around the country to torment your friends. I should like to be a preacher for a spell!"

"Well," said Uncle, in his quiet way, "I will change with you this minute. I'll do your work if you will agree to do mine."

"Agreed," said Dan.

"All right." So saying Uncle George stepped down from the buggy, and seized the

mallet. "Now, Dan," said he, "this is the business you want me to do, is'nt it? Well, now, it is the preacher's business to pray and to preach; prayers always come first, so, my friend, you can begin by getting down on your knees and saying your prayers." With that Uncle George raised the mallet and fell to work in a vigorous manner, clearly showing he was no novice at that kind of labor.

"Hold on," said Mr. L——, "I guess I'll back out; I don't think I could say my prayers as gracefully as you handle that mallet; it's something I haven't been used to."

"So much the more need for you to begin," said Uncle, "you need not be so modest about it, for we are not heard for our *fine* speeches; and if you will only get down and pray earnestly for ten minutes, I'll whack away at these posts for you till sundown."

Of course Uncle did not succeed in holding Dan to his bargain, so, with some kind words of advice and a warm shake of the hand, he took his seat again in the buggy, and we started once more for the bay.

Braddock's Bay! How often I had heard of it, and now was about to see this wonderful place, where a boy may fish all day, without any trouble, and not get a bite (unless it is mosquito bites;) where men go to camp out, and are glad to get in again — to some comfortable hotel; as Uncle George told me concerning a brother minister of his, a Mr. B——, who, with a neighbor, had gone down to the bay the previous summer to fish and camp out a few days. The first day passed along pleasantly enough, and the early evening was spent in pitching their tent and attending to other little sentimental chores appertaining to camping out; then came the evening devotions, after which they laid their weary limbs to rest.

Now, if a good conscience and being at peace with all the world are the pre-requisites for a quiet and refreshing slumber, then these two worthies certainly had a claim to such a favor; but the fates were against them. The harbingers of the summer were to have a concert that evening, and it could not be postponed because of the presence of these two strangers; so in due time the concert proceeded, with its attendant harmonies. The bull-frogs led the chorus, their double bass breaking in sonorous grunts upon the stillness of the night, followed and intermingled with the piccolo pipings of

the newts and lizards; but the crowning effort of the evening's entertainment — that which appealed most effectively to the sensibilities and judgment of an appreciative audience, was the exquisite harmony of the Miss Kitties (mosquitos.) "Enough is as good as a feast," however, and the persistent efforts of the midget musicians finally became exasperating. The dominie and his friend retired beneath their straw hats, but still the disturbing element was *feelingly* near; besides which the atmosphere was unpleasantly warm in such close confinement. But who would be outdone by a midget, or a thousand midgets, for that matter? so a towel was brought into service. First it was dipped in cool spring water, and after being carefully wrung out it was placed over the straw hat, and the hat once more laid over the face, and the party again retired, hoping to enjoy the cool, fresh air as it filtrated through the moist toweling; but

NUPHAR ADVENA. NYMPHÆA ODORATA.

"The best laid schemes of mice and men
Gang aft aglee,"

and before midnight the two friends had to ackowledge themselves vanquished. The sentimental was at a discount as they gathered up their traps and took to the boat, glad enough to find the comforts of a hotel on the other side of the bay.

But while listening to this incident Nellie carried us along at a lively pace, and soon the bay was before us. Now, having been raised on the sea coast, I suppose I had rather extravagant ideas of a bay; I confess I was taken down some; still, everything in nature has its attractions, so I concluded to find them even here. We crossed over to the north side of the bay by the only road that has been built through it, and as the road is narrow, without fences on either side, and only a foot above water, it seemed to me a very wise thing in Uncle George to let Nellie walk over; and besides, it gave me lots of time to see the reeds and various other water-plants. One kind in particular pleased me, with its flat, green leaves as large as tea plates, which must have covered acres of the water surface; but as there were no flowers to be seen, I asked Uncle about them.

"These," said he, "are Water Lilies, and have very fine, large flowers, some white and some yellow. The round leaves there are those of the white lily, *Nymphæa odorata*, while these here, of an oval shape and very slightly pointed, are the leaves of the Yellow Lily, *Nuphar advena*. The white flowers rest on the surface of the water, and are fragrant; the yellow ones stand about six or eight inches above the water. A month or two later we could, with the use of a boat, gather baskets full of the flowers."

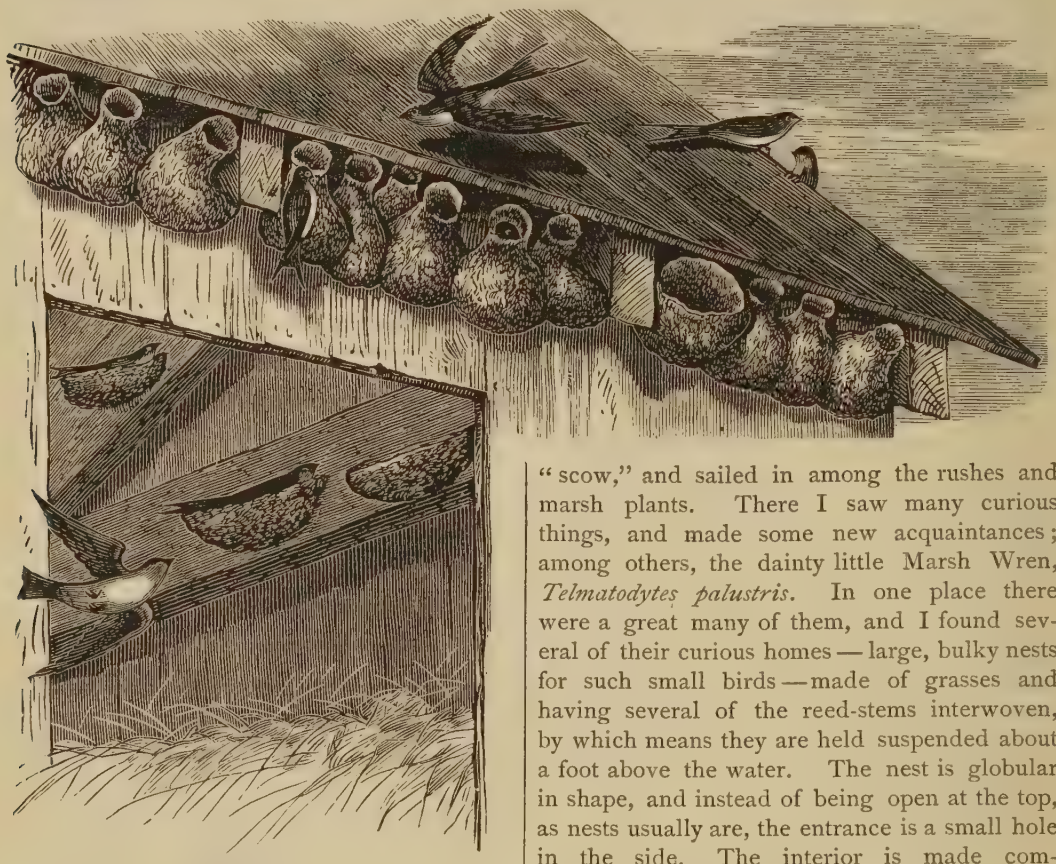
I did not fail to notice a very peculiar looking bird, in fact, there were scores of them flitting about among the reeds. The male is entirely black, except a brilliant red patch on the bend of each wing, and this again having a distinct light yellow margin; the color of the female is a dull streaked brown. They are known as the Red-wing Blackbird, *Agelæus Phœniceus*, and are found abundantly in most marshy places; Braddock's Bay seems to be a favorite resort for them, where they build their nests and rear their young in safety. They are very destructive to the grain crops in the fall, before they migrate to the South.

Uncle George put up at the house of an intimate friend of his, and I was soon given permission to go to the barn and see the Swallows. My! — here was a treat; the south wing of the barn, sheltered from the north winds by the main building, with its east side facing the barn-yard, made a very nice building place for the Swallows. The place was just swarming with them; why, I counted no less than sixty-eight nests on that one side of the south wing.

RED-WING BLACKBIRD.

They were all bottle-shaped, built of mud, and packed close together along the entire eave; and every one of them was occupied by cliff Swallows except one, the fourth from the end, which a pair of Blue-birds had taken possession of before the Swallows returned from the South.

They had broken away the narrow opening to the nest, in order to use it, and were now feeding their young, while the Swallows were just beginning to deposit their eggs.



SWALLOWS.

The Cliff Swallow, *Petrochelidon lunifrons*, is small, white bellied, with red-brown throat and a small black patch on the chest; the rest of the bird is a rich blue-black, and glossy. Their circling flight is very rapid and graceful; and the way they bob into the nest, turn around and peep out at the visitor, is truly amusing. As one bird enters the other generally leaves, though sometimes both will stay to look out at the stranger, and the incessant chatter they keep up is really very quaint and droll.

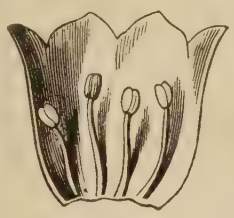
Another species, the Barn Swallow, *Hirundo horreorum*, was also among the crowd. They are quite white underneath and black above, with long forked tails, while the tail of the Cliff Swallow is square ended. I noticed, too, that the Barn Swallows went inside; and there, on the sides of the beams and rafters they had fixed their boat-shaped nests, which were also made of mud, and lined with feathers. The eggs of both species are white, beautifully spotted with rich, warm brown. These birds feed on the wing, catching the gnats and other small insects as they fly along. Their flight is remarkably swift and well sustained, and they seemed to me to know nothing at all about being tired.

Later in the afternoon we got the loan of a "scow," and sailed in among the rushes and marsh plants. There I saw many curious things, and made some new acquaintances; among others, the dainty little Marsh Wren, *Telmatodytes palustris*. In one place there were a great many of them, and I found several of their curious homes — large, bulky nests for such small birds — made of grasses and having several of the reed-stems interwoven, by which means they are held suspended about a foot above the water. The nest is globular in shape, and instead of being open at the top, as nests usually are, the entrance is a small hole in the side. The interior is made comfortable with finer grasses. The eggs are quite small, from six to eight in number, of a dull chocolate-brown color, and clouded. These Wrens are exceedingly lively little fellows, and it seems impossible for them to keep still while the day lasts.

HOLLYHOCKS.— I have had a Hollyhock in my garden for four years. The florist in our place says that is longer than they generally live, and he told me at first how to do it. I only let half the flower-stems grow, and cut off the others as soon as they start. Then in the autumn, I guess in October, generally I cut off pieces from the main plant. You can see where to cut them, because there are little heads or branches. So I cut them off with some of the root, and make new plants, and I think it does the old one good. Last year I had a *Poppy* that measured more than six inches across, almost seven, and it was a very bright red. You could see it standing up, like a flag, a long way off. It had a black spot on each petal, at the lower part, where it joins the stem. It was called the *Oriental Poppy*.—EMELINE.

BOTANY FOR LITTLE FOLKS.

As already noticed, a flower is usually borne on the end of a little branch or flower-stem called the *peduncle*, the extreme end of which is enlarged and sometimes flattened; this place or part, the enlarged end, is called the *receptacle*, because it receives or holds all the parts of the flower. When a flower is *sessile*, that is apparently sitting directly on the stem or branch of the plant, there is a very small connecting part or unproduced flower-stem, which attaches the flower by the receptacle to the plant: this receptacle or base, therefore, always bears or supports the different parts of the flower.



Belladona. *Fig.* 61.

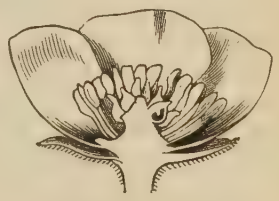
Sometimes the sepals, the petals, the stamens and the pistils are arranged so that each one stands on the receptacle separate and free from every other one, and each one may be removed from it without disturbing any of the others. Much oftener, however, they are connected in some way; for instance, *fig.* 61 represents a section of the corolla of Belladona, showing the stamens attached to it. This union of the stamens with the corolla is almost invariable in monopetalous flowers, or such as the Morning Glory, *fig.* 49 in previous article. Stamens are sometimes connected together forming a tube, as at *fig.* 62 the stamens of Cytisus are shown so united, with the point of the pistil protruding beyond the summit.

The number and arrangement of the floral organs constitute distinctive marks of the highest value in determining the relations of plants. By these distinctions principally they are grouped together into large *families* or *orders*, and into smaller groups or *genera*. It is easy to perceive a general resemblance to each other in the Pumpkin, the Squash, the Gourd, the Cucumber and the Melon, for they have similar habits, and there is a resemblance, to some extent, in their fruit. If we examine the flowers of these plants we shall find in them a very close resemblance, and they are therefore considered as related to each other, and as belonging to one family called the Gourd Family. But the Gourd is different from the Cucumber and the Cucumber from the Squash; therefore, each of these is placed in a division by itself; each of these divisions is called a *genus*, and when two or more of these divisions are spoken of collectively the word *genera* is used, for this is the plural of the word *genus*. Now, there are different kinds of Gourds, Cucumbers, Squashes etc., found growing in a natural or wild state, and these are distinguished from each other by their habit of growth, the peculiar shape or other characteristics of their leaves, or the size and color of their fruit; each distinct kind is called a *species*.

Cytisus. *Fig.* 62.

Every plant bears two names, one the name of the genus, the other the name of the species. To make this plain, we will take the Maples; the botanical or scientific name of all Maples is *Acer*, but we must distinguish between the Sugar Maple and the Red Maple and the Black Maple, and therefore these different kinds have their Latin names, just as we give them English names, only, instead of having the name of the kind or species first and then the name of the genus last, as we have it in English, it is reversed in Latin. We say, Red Maple, but in Latin this is Acer rubrum, Acer meaning Maple, and rubrum red; so, Black Maple is Acer nigrum, and Sugar Maple is Acer saccharinum. All this will be well understood after we are accustomed to use these names as botanists do, for it is only custom that causes us to use our own proper names first and then the name of our family after; John Smith would be known just as well by Smith John if it were customary to speak in this way.

Let us now glance at the ground passed over. At first it was shown that all vegetation is divided into Flowering and Flowerless plants, and that the flowering plants are divided into two classes — of *outside-growers* and *inside-growers*, or exogens and endogens.



Ranunculus. *Fig.* 63.

We now see that each of these classes is divided into Families or Orders, that the Orders are divided into smaller groups called Genera, and these again into separate kinds or Species.

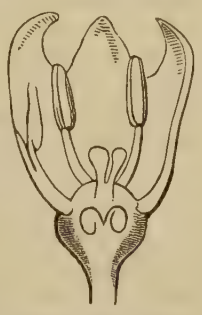
As already noticed, the arrangement of the parts of the flower in relation to each other is a matter of great importance in determining the orders or families of plants, and we will now notice three different kinds of arrangement with which we should become familiar, to enable us hereafter to compare other flowers with them. In the Ranunculus, *fig.* 63, we have an example of each part of the flower standing distinct and separate on the receptacle; the ovaries in this case standing at the summit of the receptacle and free from the other parts,

are said to be *superior* or *free from the calyx*. The calyx, the corolla and the stamens are *below* the ovaries. In the illustration of the Apricot, *fig.* 64, is seen a combination or union of the petals and stamens with the calyx. The calyx is situated or inserted upon the receptacle below the ovary, and the petals and stamens appear to rise out of the calyx; in this case, as in the previous one, the ovary is *superior* or *free from the calyx*, and the calyx *inferior*, but the stamens and petals are said to stand around the ovary.

Apricot. *Fig.* 64.

The flower of the Madder, *fig.* 65, shows an arrangement quite different from either of the former. In this we see the stamens, the corolla and the calyx inserted upon the ovary and apparently springing out of it,—we say *apparently*, for really these organs have their origin on the receptacle as truly as in the case of the Ranunculus, but they grow together and cohere with each other until they reach the point where they separate and each part takes its own peculiar form. The ovary in this case is said to be *inferior*, and the other parts *superior* or *adherent* to the ovary.

In examining flowers a great many modifications of these forms will be found, but any flower, in regard to the relative situation of the ovary to the other parts, may be referred to one of the three forms here described. Although the points we have now considered in relation to plants are comparatively few, and an immense field lies before us, still, if what has been said is well understood, we may profitably examine or analyze a plant, as completely as possible with the limited knowledge pertaining to it which we have now acquired.



Madder magnified. *Fig.* 65.

The subject selected for examination, the tall Buttercup of the fields, *fig.* 66, is one with which, as children, we are all familiar, especially by its contributing to our amusement in deciding sportively our preference for butter by holding it under each other's chin, upon the smooth surface of which its shining, bright-yellow petals reflect their own rich hue. By glancing at the plant we decide promptly that it is *herbaceous*, an herb, that is, it is not woody; the net-work of the veins of the leaves, as shown at *fig.* 70, enables us to class it as an *exogens* or *outside-grower*. It will be remembered that on page 126, *stipules* were described as leafy appendages. After looking carefully about the base of

Fig. 66. TALL BUTTERCUP, (RANUNCULUS ACRIS.)

the leaf, we find our plant has no stipules. We have already noticed the arrangement of the several parts of the flower and seen that each part is situated directly on the receptacle, free and distinct from every other part.

We also perceive that the stamens are numerous, that is, there are more of them than twice the number of sepals; this is very clearly seen in the diagram, *fig.* 67. The diagram shows the position of the parts of the flower as they would appear in the bud if cut across and magnified. It will be noticed that the sepals and the petals overlap each other in a peculiar manner; two of the sepals overlap others with each end, two are overlapped on each of their ends, and one is overlapped on one end and with the other end overlaps the end of another sepal. The petals are arranged in the same manner. This arrangement is called *imbrication*, and the sepals and petals are said to be *imbricate* in the bud; perhaps you will remember this word better if you understand that it was first used to describe the way that bricks are laid over each other in building a wall. *Fig.* 68 is a view of the end of the peduncle, and the receptacle with the pistils standing on the summit, and two of the stamens, all enlarged.

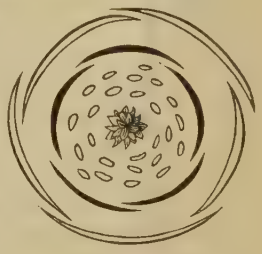


Fig. 67. Diagram of Flower Magnified.

By reference to the description of the different families or orders of plants, we find that

herbs with a clear juice that is acrid or biting to the taste, with flowers having all their parts, the sepals, the petals, the numerous stamens and pistils whether few or many, standing separately on the receptacle, belong to an order or family called the *Crowfoot family*. This is the English name and it is so called because most of the plants in this order have palmate leaves divided into three parts, which may be fancied to resemble the foot of a large bird, like a crow. This is a large family and has a great many branches and members, a few of which will be mentioned hereafter.

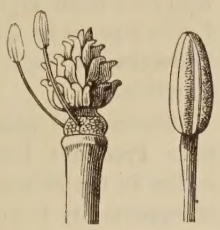
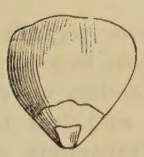


Fig. 68. Pistils and Stamens enlarged.

Among the branches of this family there is one, the members of which have sepals *imbricate in the bud*, petals as well as sepals,—for some members of the family have sepals, but no petals—and, in almost every kind, each petal has a little scale at its base, on the inside. This description agrees with our flower, for, on pulling off one of the petals, we find the little scale at the base, as shown at *fig.* 69. The name of this branch or genus of the family is *Ranunculus*. There are many kinds of Ranunculus, some of which always grow in the water and are therefore called *aquatic*, and others grow in the fields or by the roadside, and others, still, are cultivated in our gardens. The specimen before us is distinguished from all the other kinds that do not grow in the water, by having all its leaves divided to the very base, by its large and bright-yellow petals, by its erect stem growing from two to three feet high, and by its flower-stem having no channel or furrow in it, which some of the other species have. The name of this species is *acris*, meaning *pungent* to the taste. All the kinds of Buttercup have an acrid juice very disagreeable to cattle, which shun these plants on this account; this acrid principle passes away in drying the plants, and therefore they are not objectionable, dried in the hay. The correct name for our plant we have now learned is *Ranunculus acris*.



Petal with scale. *Fig.* 69.

The name *Crowfoot*, for the family or order, is the English name. The proper scientific name is *Ranunculaceæ*, that is, like the Ranunculus; for the flowers of all the plants of this large order bear a resemblance to the Ranunculus or Buttercup. The ending of the word, *aceæ*, means *like*. The Clematis, the Anemone, the Hepatica or Liver-leaf, the Meadow Rue, the Marsh Marigold, sometimes called Cowslip, the Aquilegia or Columbine, the Delphinum or Larkspur, the Aconite or Monkshood, the Adonis, the Nigella or Love-in-a-mist and the Pæonia are members of different genera, all belonging to the order Ranunculaceæ, and by examining carefully the flowers and other parts of these plants, the points of resemblance will be very apparent.

Some species of the Clematis are woody, or almost so, and there is a kind of Pæonia called the Tree Pæonia that forms a small shrub, with a woody stem. With these exceptions, all the plants of this family are herbaceous. There will be found in the different plants belonging to this order quite a variation in the number and form of the petals and sepals—the usual number, as in the specimen just examined, is five; but in the Clematis we find four sepals, sometimes colored and sometimes white, and no petals; in Anemone, Hepatica, Meadow Rue, and some other genera, there is a similar absence of petals, but the sepals are colored and almost always showy flowers. The Columbine has petals curiously shaped like a shell or horn with a long spur, and the sepals are colored, adding much to to the beauty of the flower. In the Larkspur there are five colored sepals and four petals; one of the sepals has a spur behind, and two of the petals have spurs included in the spur of the sepal; the other two petals are not spurred. Many other variations may be noticed, but the distinctive marks of the order will be found in every specimen,—*the pistils, few or many, and the numerous stamens and other parts of the flower, always stand distinct and separate on the receptacle.*

Fig. 70. TALL BUTTERCUP, LEAF AND FLOWER.

SPRING WEATHER. — Up to about the 8th of May the spring all over the conntry was unusually warm, the weather in April and early May being like June for mildness. As we feared, this was followed by cold winds and frosts, and now, May 16th, we have cold days and slight frosts at night. The effect on the fruit crop will be serious, we fear. Those who were rash enough to put out bedding plants will also have cause to regret their eagerness. Tender plants should not be entrusted to the tender mercies of a northern climate until about the first of June.

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I authorize the officers of every State and Territorial Agricultural Society in the United States (and where there are two prominent Societies in one State, both,) and the Provinces of Canada, to offer, in my behalf, the following premiums:

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Second Best " "	**10 00**
Third Best " "	**5 00**
Fourth Best " "	**Floral Chromo.**

The offer is made to amateurs only, and the flowers to be exhibited at the usual Annual Fairs. The awards to be made by the regular Judges, or by any committee appointed for the purpose. When only one collection is exhibited, the Judges may award the first or any other premium, according to merit, but the exhibition must be a creditable one, and if not so, in the opinion of the Judges, no premium to be awarded. The flowers not to be made up in bouquets, but exhibited separate and named, the object being to award the premiums to the flowers, and not for tasteful arrangement. Also,

For the Best Ornamental Floral Work,
(either Bouquet or Floral Ornament,) . . . **$5 00**

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PAINTED FOR VICK'S MONTHLY.

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